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EXCAVATION OF A SITE AT SANTIAGO AHUITZOTLA, D. F. MEXICO

BY

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SMITHSONIAN INSTITUTION,
BUREAU OF AMERICAN ETHNOLOGY,
Washington, D. C., January 13, 1920.

SIR: I have the honor to transmit the accompanying manuscript, entitled "Excavation of a Site at Santiago Ahuitzotla, D. F. Mexico," by Prof. A. M. Tozzer, and to recommend its publication, subject to your approval, as a bulletin of this Bureau.

Very respectfully,

J. WALTER FEWKES,
Chief.

DR. CHARLES D. WALCOTT,
Secretary of the Smithsonian Institution.

PREFACE

The investigation described in the following paper was undertaken by the writer as Director of the International School of American Archæology and Ethnology, Mexico, in the winter of 1913–14. It was due to a suggestion from Señor Don Manuel Gamio, Director of Antiquities, that the site in question was selected, and it was due to his official permission and to his courtesy and aid that the work was carried on. To his brother, Señor Rodrigo Gamio, Mexican Fellow of the School, my thanks are due for long continued and faithful assistance in the excavation, and to Clarence L. Hay, Esq., Harvard Fellow, I owe many valuable suggestions in carrying on the work, and I also thank him for aiding me in the general supervision of the excavations. Dr. Herbert J. Spinden has given me some suggestions regarding the nomenclature of the pottery classification.

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EXCAVATION OF A SITE AT SANTIAGO AHUITZOTLA, D. F. MEXICO

By Alfred M. Tozzer

INTRODUCTION

Since the days of the Spanish occupation, the vicinity of Mexico City has naturally been a rich field for the antiquities of pre-Columbian times. Mexico City, the ancient Tenochtitlan, has yielded a large variety of remains, from the well-known Calendar Stone to thousands of minor objects appearing wherever any extended excavations have been carried on. Outside of the city proper an immense number of objects has come to light. These consist of small clay heads, figurines, and pottery of various varieties, with a relatively small number of stone objects. One of the richest fields for these relics is northwest of the city and west of the suburb of Atzcapotzalco. This is at present a center for the brick-making industry, and it is owing principally to the excavations necessary in taking out the adobe that there has appeared a very large number of objects from this locality. Among the first to undertake careful excavations here was the International School under the successive directorships of Professors Seler and Boas, Dr. Engerrand, and the author. The most important archeological problem for the past years has been the investigation of the various strata in this area as showing the succession of cultures which have been called, respectively, the Archaic (*tipo de montaña* and *tipo de cerro*), Toltec[1] (pre-Aztec or Teotihuacan), and Aztec. The importance of this study upon the general archeological problems of Mexico and the greater part of Middle America can not be overestimated.[2]

[1] It has seemed best to the author to employ the much-abused term "Toltec" to designate the culture preceding that of the Aztec in the Valley of Mexico, that culture to which are due the structures at San Juan Teotihuacan.

[2] See Boas, "Summary of the work of the International School of American Archeology and Ethnology in Mexico," Amer. Anthrop., n. s. vol. 17, pp. 384–395, 1915; Tozzer, Report of the Director of the International School of American Archeology for 1913–1914, Amer. Anthrop., n. s. vol. 17, pp. 391–395, 1915.

It is with some surprise that we learn that Seler in his last published papers on Mexico ("Die Teotiuacan-Kultur des Hochlandes von México" in his Gesammelte Abhandlungen zur Amerikanischen Sprach- und Alterthumskunde, vol. 5, Berlin, 1915, p. 409) refuses to accept fully the theory that people of the Archaic culture lived in the Valley of Mexico. He thinks that the archaic remains were washed into the valley from the surrounding mountains. The fact that archaic specimens have been found with

In almost every case these objects from the adobe beds of this locality are not found in artificial mounds, but on the level plain. Several mounds do, however, occur in this area, the largest of which is the Cerro de Montezuma near the railroad station of Naucalpan. The first of these mounds to be excavated was one near San Miguel Amantla. The work was carried out by Señor Manuel Gamio under the auspices of the International School. It was found to date from the Toltec period and yielded two interesting braseros, made up of a bowl and cover.[3] A chimney ran upward from the top of the cover. On this as a background was built up a superstructure consisting of a large head surrounded by a number of separate clay ornaments. These adornos have appeared in large numbers throughout this area, and here for the first time they have been found in their original positions. The mound described in the present paper was one similar to that at San Miguel Amantla.[4]

NAME AND LOCATION OF SITE.—The site consists of an artificial hill, called by the natives "Coyotlatelco," the "hill of the coyote," situated in a milpa, a short distance west of the pueblo of Santiago Ahuitzotla, in the township of Atzcapotzalco, Federal District, northwest of Mexico City. The mound is just north of the road running from Atzcapotzalco to Los Remedios. The excavated portion is about 44 meters north and south and 22 meters east and west. A road has been cut across the site on the west, thus diminishing the area possible for excavation on this side.

TYPE OF SITE.—The site (pl. 3) belongs primarily to the Toltec or San Juan Teotihuacan culture. The plan resembles in many details that of the rooms excavated near the great pyramids at Teotihuacan,

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no evidence of being water-worn and with paint still upon them seems to prove that they were left by people living in the places where they were found and at a time preceding the occupation of the valley by the people we call the Toltecs. Some very large and fragile archaic specimens were found by Mr. Hay in an hacienda near Naucalpan which could not possibly have been carried by water from the hills surrounding the valley. These specimens are now in the National Museum in Mexico.

[3] A brasero very similar to those excavated by Señor Gamio is shown in plate 14.

[4] Seler (*op. cit.*, p. 451) writes, "Aus dem Profile, das Gamio gegeben hat, geht selbstverständlich mit Sicherheit hervor, dass an dieser Stelle, in San Miguel *Amantla* (und den benachbarten Orten), Menschen der *Teotiuacan*-Kultur vor der Zeit gelebt haben, wo Angehörige oder Vorfahren der Nation, die in den letzten Jahrhunderten vor der Conquista das Thal von México bewohnte, die flachen runden Hügel aufschütteten, in denen Gamio Thonalterthümer der aztekischen Zeit des Valle de México fand. Und ebenso scheint mit Bestimmtheit erwiesen zu sein, dass an der Stelle des heutigen San Miguel *Amantla* eine hundert Meter breite Fiumara Bruchstücke von Thonfabrikaten des primitiven Typus von den auf den Höhen gelegenen Ansiedelungen herunterschwemmte, ehe die klimatischen und geologischen Verhältnisse oder die durch die Zeitumstände gegebenen Bedingungen den Menschen der *Teotiuacan*-Kultur eine Ansiedelung an dieser Stelle gestatteten." This statement seems to infer that Seler believes that the low mounds in this vicinity were made by the Aztecs. From the excavations here described and from the mound excavated by Gamio, it is clear that many of these mounds, if not the greater part of them, were Toltec in origin. Señor Eduardo Noguera, working under the direction of Señor Gamio from September to December, 1920, excavated a mound near Mixcoac. This is clearly Aztec in type. From the photographs, plan, and description which Señor Noguera was good enough to send me I find very few points of similarity between this mound and the one described here.

and the greater number of objects found belong clearly to this culture. The site was occupied for a considerable period of time, as indicated by the frequent changes of plan and by the superimposed floors. The Aztecs dwelt here at a later date, as shown by the fact that Aztec pottery and figurines are found near the surface over the whole hill.

It is impossible to determine with exactness the demarcation between the Toltec and Aztec cultures. It seems probable, however, from a careful study of the remains coming from each room and from each of the different levels, that the greater part of the walls and floors date back to pre-Aztec times and that the frequent destruction and rebuilding, floor over floor, was undertaken, for the most part at least, by those of the same period. This question of the relative time in which each part was erected will be discussed later in taking up the sequence of the construction (p. 37).

Age of site.—Only a very rough approximation can be made of the time of the erection of this Toltec mound, and we have to go rather far afield for some of the data on this point. According to one tradition, Tula was founded by the Toltecs in 752 A. D. and was destroyed in 1064. These dates have usually been considered too late to be regarded as historic. We know that the Toltecs were used as mercenaries by the people of Mayapan in Yucatan against the inhabitants of Chichen Itza. The influence of the Toltec culture is very strikingly shown in the latest period of Chichen Itza, which was from about 1200 to 1450 A. D. We can, therefore, with some approximation of truth, say that the Toltecs flourished toward the end of the first millennium after Christ, and that their influence in Yucatan, at least, extended into the fifteenth century.[5]

Orientation.—The walls of the buildings, with one exception, seem to have been carefully oriented. The general direction is a few degrees east of north. The wall built over Floor M in the northwest corner is not in line with any of the other walls of the buildings. It is to be hoped that the Inspector of Monuments of Mexico will have a careful survey made of the site in order to establish the exact alignment of the walls in reference to the true north.

Plan in general.—The ground plan (pls. 1, 2) of the excavation may be divided roughly into seven sections:

1. Main structure inclosed by a low terrace or step, making it, to a great extent, a unit.
2. Highest Floor A built over the center of the Main Structure.
3. The Southern Extension, including Rooms VIII–XI.
4. The Northern Extension.

[5] For additional data on these points, see Tozzer, "The domain of the Aztecs and their relation to the prehistoric cultures of Mexico" in Holmes Anniversary Volume, pp. 464–468, 1916.

5. The southern higher level Floor B.
6. The northern higher level Floor B′.
7. The floors beneath the Main Structure.

Looking at the plan in cross-section another classification is necessary:

1. Highest Floors A, A′.
2. Northern and southern higher level Floors B, B′. Floor C, the higher of the two floors in Room II and the top of the stone stratum to the east of the Eastern Terrace (pl. 2, sec. *k–l*).
3. Main Structure with Rooms I–VI and the Terraces.
4. Northern and Southern Extensions.
5. Floors under Rooms I, II, V, and VI.

Description of plans and sections.—It is impossible to obtain an adequate idea of the various constructions and of the explanations in the text without consulting freely the plans and sections.

Plan I (pl. 1) shows the walls and floors now standing. Walls and pillars shown in solid black are still in place or are clearly indicated by a break in the floor, with the characteristic upward slope of the floor toward the walls. Dotted lines indicate the probable extent of other walls. Rooms are indicated by Roman numerals and the floors by capital letters. Various features to which attention is called are numbered. Floors still in place are shown in color.

Section *a–b* runs north and south.[6] The depressed Floor H in Rooms IX and X, although not appearing in the section, is indicated by small dots.

Section *c–d* also runs north and south. Here is indicated by small dots the stone wall at the southwestern corner of the Patio and the floor level of Room I.

Section *e–f* runs east and west. The contour of the hill is shown in all three sections.

Plan II (pl. 2) is an attempt to indicate the floors beneath the level of those of Plan I. The various excavations made in order to get beneath the surface of the main floors and as entrances to the tunnels are indicated by Roman numerals (XIV–XXIX). Floors, as in the previous plan, are given in capital letters. The various tunnels are indicated by small letters. The walls of the tunnels directly below Room I are shown by wavy lines. The two lowest tunnels are indicated by a zigzag line. The stratification of the various cuts is shown in all cases where it could be determined.

Section *g–h* runs north and south, cutting the floor level C in Room II.

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[6] I am indebted to the Engineer of the Office of the Inspection of Monuments for the various heights of the floors. The plans here offered were made by careful measurements but were not surveyed with a transit.

Section *i–j* also runs north and south. An attempt is made here to indicate the character of the stratification as shown by the various excavations. Although not included in the section, the floor of Room I together with the entrance to Tunnel *f*, Floor P, and Tunnel *j* are shown.

Section *k–l* runs east and west. Attention should be called here to the earth and stones left to the east of the Eastern Terrace. This is not shown in any of the other plans.

In the description of the site few measurements will be given, as these are clearly indicated on the plans and sections.

ORDER AND METHOD OF EXCAVATION.—A small excavation had been made in the center of the hill by some one hunting for idolos. This had, unfortunately, destroyed a large portion of the southern part of the topmost floor (A) and made it impossible to obtain complete data on the site. Several pieces of the plaster of the floor were found. A second and more excusable damage was done to the hill by the cutting of a road along the northern side. This decreased the whole area possible for excavation by about a fourth and made it impossible to establish the complete plan of the northern side. With these two exceptions the hill was intact.

Higher floors.—The excavation started about the center of the hill to the north of the hole made by the relic hunter. Floor A was immediately discovered (pl. 8, *a*) under a thin layer of adobe. The floor was only about 0.6 m. from the surface. Floor A was followed in all directions. On the northern and western edges of this floor excavations were made and Room I (pl. 4, *b*) with its fine plaster floor was uncovered. The greater part of Room I was found filled in solid to within 0.4 m. of the level of the hill with adobe bricks. This adobe filling extended to the east into the space I have called the Patio, over Floor P to the point where the stone wall makes a corner and turns to the south (near 4, pl. 1). Room I was excavated its entire length, showing the pillars at either end. Through the doorway on the west, Room II (pl. 8, *c*) was entered. To the west of this entrance and at several places in Room II the filling was made of alternate layers of earth and stones. Working from Floor A, Rooms V and VI (pl. 5, *b*) were soon shown. Excavation was also carried on to the south of Floor A in the old depression made at some previous time and continued until Floor P was encountered. Work was continued to the south until the northern wall of Rooms III and IV was found. This cleared the space of the Patio down to the level of Floor P. Rooms III and IV were next uncovered. By continuing east of Room IV a portion of the Eastern Terrace was shown. The terrace was followed from this point in both directions and the southeastern corner was soon found (pl. 5, *a*). The corresponding north-

eastern corner and the northern side were next uncovered (pl. 7, *b*). The western side was then excavated, thus completing the square.

As this was going on Floor B (pl. 5, *a*) was found and cleared. Owing to the symmetry of the rooms in the Main Structure inclosed by the Terrace, it was considered probable that a floor corresponding to B would be found on the north, and Floor B′ (pl. 6, *b*) was noted exactly similar in height and position to B.

The floors of the Terrace on the northwestern and southwestern corners were followed and the northern and southern additions (XII and X) to the Terrace were uncovered. Room X on the south led the way to Floor H and Room IX (pl. 6, *a*). Room XI was entered through the doorway from Room IX. Excavations were made to the south of IX and Rooms VII and VIII were found. A wide trench was then made to the south of VII, VIII, and XI. No floors were found, thus showing that the southern limit of the site had been reached. A trench was also made to the east of XI, where pieces of rough flooring (L, L′, L″) were found with no remains of a wall. Excavations along the southern side and eastern end of Floor B showed no remains, thus marking the southeastern limits of the site.

Four trenches were next run out at right angles to the Eastern Terrace in order to ascertain the limits on this side (pl. 2, sec. *k–l*). Several pits were dug near the eastern and northern sides of Floor B′, but no remains were found until Floor O was reached.

The entire western side of the site was limited by the road. The various floors were followed in each case until they were lost under the road or broken by the cutting of the road. Excavations were undertaken in the milpa on the opposite side of the road. Shards and other objects, together with large pieces of floor, were found, showing that the site continued for some distance to the west. No floor was found in place, so that coordination with the floors in the main excavation was impossible. In this excavation to the west of the road the stratum of ashes which runs under the Main Structure was encountered approximately 1.45 m. below the floor level of Room IX. Adobes and pieces of tepetate were also found. This excavation was 6.5 m. from the western edge of Room IX.

In many places, as noted on the plans, the walls are still standing. The plaster covering of the walls is still in place in many cases. It was usually very easy to trace the walls which had fallen, together with the pillars, as in every case the floor rose slightly as it approached the wall (pl. 8, *b*). These upward slopes of the floor end at the wall and in very few cases does the floor continue under the wall. There is no distinction in the plan between the walls still standing and those walls which are clearly indicated by this upward slope of the floor. Both are shown in full black.

Tunnels.—As excavations progressed and the site bid fair to be of some importance the Inspector of Ruins, Señor Manuel Gamio, decided to have it preserved as a National Monument. Fortunately no floors had been taken up and the site could be studied as it had been uncovered, with nothing destroyed, with the exception, previously noted, of the pit dug in the center of the hill and the cutting for the road. A complete examination of the lower-level floors could be made only by removing those above them. As it was not thought expedient to remove any of the floors, tunneling was extensively employed (pl. 2). The lower floors, as shown in the tunnels, proved to be on an amazing complex of levels, and it was possible only in a few cases to trace the plan of complete rooms.

It may be well to enumerate the tunnels and the purpose for which they were excavated. No attempt will be made to keep to the order in which they were opened.

Tunnels *a* and *b*, under Floor B, were made in order to trace the northern wall of Room XI, the floor in front of the Southern Terrace, and the construction under Floor B.

Tunnels *c–j* (pl. 4, *a*), under Rooms I and II, were started by following Floor P in the open cut and continuing under the rooms to the west in all directions.

Tunnel *k* runs under Room V and is a continuation of the series of tunnels under Floor A. It was dug in order to trace the extent of Floor P.

Tunnel *l* runs from Pit XXIII to Pit XXV and connects with Tunnel *m*.

Tunnel *m* runs under Room VI and connects Pit XXV with Pit XXVII.

Tunnels *n–p* run under the northern wall of Room VI and northward under Floor B′ in order to trace a stone wall and floor found at the lower level, together with the construction under Floor B′.

Tunnel *y* (pl. 4, *a*) was run from Pit XVII to Pit XXI under the system of tunnels beneath Rooms I and II in order to exhaust the possibility of floors under Floor P.

Tunnel *z* connects with *y* running under the northern elongation of Floor P and coming out in Pit XXIV.

Pits.—In order to find out the stratification, together with the various floor levels, and also to serve as entrances to the tunnels, numerous square holes were dug throughout the site. These excavations were never made where the floor was still in place. In most cases these were filled up after the necessary data had been obtained.

Pit XIV, outside the eastern wall of Room XI, was dug under Floor L which was taken up in one piece and afterwards replaced. This excavation showed no remains of any kind.

Pit XV, at the southern end of Room XI, was justified owing to the fact that the floor at this point was badly broken and had sunk. This excavation is described in another place (p. 25).

Pit XVI, at the southern side of Room IX and extending into Room VII, was made through the floor broken on account of the subsidence here. This also is described elsewhere (p. 25).

Pit XVII was dug through the broken floor of the Western Terrace. Tunnel *e* with Floor P^4 runs into this excavation together with the lowest Tunnel *y*.

Pit XVIII, also through the Western Terrace level, formed the western end of Tunnel *i*.

Pit XIX was made in Room III which showed no remains of a floor. It was the eastern end of Tunnel *d*.

Pit XX, in the eastern end of Room IV, connected with no tunnels but was dug to note the possible presence of the ash stratum and the formation below the excavated level of the Patio. This excavation also showed that there were no floors under Room IV.

Pit XXI was an important excavation in the center of the Patio below the edge of Floor P made in order to dig Tunnels *y* and *z* below the series of floors under Rooms I and II.

Pit XXII, made through the broken floor of Room I below the western edge of Floor A, forms a side entrance into Tunnel *g*.

Pit XXIII begins at the level of Floor A, showing the various strata forming the foundation for this floor, and connects with one of the tunnels under Floor A. Tunnel *j* also enters this excavation at the western end. Floor P′ forms the western side of the bottom of this hole.

Pit XXIV is an excavation under the eastern part of Pit XXIII. It runs through a stratum of ashes (p. 25) and connects with Pit XXV (pl. 2, sec. *k–l*). Below these two last holes four wells were found (p. 24). Lowest level Tunnel *z* runs into Pit XXIV on the western side.

Pit XXV, made in the northeastern corner of the Patio, connects, as has been noted, by Tunnel *l* with Pit XXIV. Directly at the bottom of this excavation Well Z is located. Tunnel *m* runs into Tunnel *l* near the corner of this excavation.

Pit XXVI was made between the southern edge of Floor B′ and the Northern Terrace. It is interesting as showing the construction under B′ and served as the entrance to Tunnel *n*, the tunnel being prolonged to the north of this excavation.

Pit XXVII was excavated at the very northeastern corner of Room VI where the wall and floor had disappeared. It served as the northern entrance to Tunnel *m* and the southern end of Tunnel *p*.

Pit XXIX was dug at the northwestern corner of Room XIII in order to find out if there were any floors beneath this room. A burial (p. 41) was found in this excavation.

GENERAL DESCRIPTION

Construction.—The materials used in the construction of the buildings are stone, adobe, tepetate, and earth.

Walls.—The walls are, in the main, made of adobe and earth. Stone is used very sparingly. I can not explain the sporadic use of stone in some of the walls. A wall will be built for the greater part of its length of adobe bricks, with a small portion of the same wall built of stone. This sudden change from adobe to stone is also noted at San Juan Teotihuacan. With one exception (p. 31), the walls do not have the sloping buttress-like projection at the base which is a very common feature at San Juan Teotihuacan and Tula, as well as in the buildings erected under the influence of the Toltecs at Chichen Itza.

Stone walls.—With the exception only of the buttress-like walls to the west of Floor A, the stone construction is very crude. The stones are usually not worked in any way and are not laid in plaster or cement. In one case the wall set at an angle on Floor M in the northwestern corner is composed of earth with two lines of worked stones running horizontally through it. A line of nicely worked stones is used as the facing of the terrace, and a line of square stones set at an angle is found at the base of the outer walls of the Main Structure (pl. 1, 7, 7′).

The most important stone walls are those running out into Room I. The buttress-like effect of this wall in relation to the floor of the room is seen in plate 1, section *e–f*. These walls by means of an elbow-like turn form the northern and southern sides of the Patio. A stone wall was also at one time present on the eastern side of the Patio. A small portion of the outer wall of the Main Structure, that forming the southern side of Room III and a part of the northern wall of Rooms V and VI, is still in place. This is of stone, and it may well be that at one time this entire outer wall was built of stone. The only wall remaining in any way connected with Floors B and B′ is that on the southern side of B′, and it is built of stone.

Adobe.—Adobe bricks are the most common material for building walls. They are used in almost all cases for the interior walls of the Main Structure. They are usually faced with a thin layer of plaster. The western wall of Room I and the walls of Room V (pl. 5, *b*) show the plaster still remaining on the walls. The highest walls of adobe now in place are only 0.83 m. in height. Above this the adobes are covered with earth. The erection of Floor A, covering, in all

probability, the greater part of the central portion of the site, necessitated tearing down the top of all the walls of Rooms I–VI. The walls widen out in some places at the sides of a doorway. (See the door from Room I to Room II, pl. 4, *b*.) This is a common feature at Teotihuacan. The sloping walls in the rooms, a feature very common at Teotihuacan, is found here only at one place, Room IX on the northern side of the northern wall. An overhang in the wall, found also at Teotihuacan, is seen here in the northeastern corner of Room IX (pl. 8, *d*). Adobe is almost exclusively used in the construction of the pillars to support the roof. These adobe supports are very common at Teotihuacan. The size of the adobe bricks seems to vary from 0.3 to 0.7 m. long and about 0.1 m. thick. In a few cases adobes were found 0.88 m. long.

Earthen walls.—The greater number of walls in the Southern Extension (Rooms VII–XI) and Northern Extension (Room XIII) seems to have been built simply of earth with a layer of plaster as a facing.

Tepetate (from *tetl*, "stone," and *petlatl*, "mat"), a geological formation formed by the leaching out of the surface and a redeposit farther down, is used very often in the construction of the walls, and in a few cases as the foundation for floors. It is found in thick beds only a short distance from the site. It is still used for walls by the present inhabitants. When first uncovered it is comparatively soft and is cut into blocks by saws. On exposure to the air it hardens quickly and is very durable.

No walls were found in place over 1.2 m. in height. It is evident that the upper portions of the walls were destroyed in the rebuilding. Several explorers at San Juan Teotihuacan mention the fact that the walls remaining consist only of the lower portions.

Floors.—These present much variety in their construction. The best floors are often of hard cement 0.1 to 0.2 m. in thickness. Floor A is an example of this kind. In other cases the floor is made of a very thin layer of plaster over adobe bricks. These floors are most perishable and seem to have been renewed from time to time. The floors of Rooms I and II are of this type. One of the lowest floors (P) is very uneven and made of a mixture of plaster and tepetate. This makes a very hard and very durable substance.

The floors are built at many different levels. In many cases a floor suddenly ends with no signs of a wall bordering it and another begins at a lower level. Floors run under floors at several different levels. The distance between floors is often less than 0.1 m. There are often sudden breaks in the floor which are difficult to explain. There is an even break around the floor of Room I (pl. 4, *b*) which illustrates this point.

In a few cases the edge of a floor is lined with a row of worked stones set almost flush with the floor. Along a part of the eastern side of Room I a row of stones (pl. 1, 3) seems to indicate possibly a doorway into the Patio. The southern edge of Floor Q in Tunnel *f* (pl. 2) and the floor in Tunnel *p* show a line of worked stones set flush with the floor. The edge of the depressed Floor H in Room IX is lined with worked stones. Squared stones are also found on the edge of Floor F (pl. 1, 14).

Drains.—With the exception of the perforated stone found over the cluster of four wells (p. 24), there are no signs of drains, a feature very common at Teotihuacan.

Roofs.—As might be expected, there are no remains of the roof construction. This was undoubtedly of some perishable material. The columns at either end of Room I and those around the eastern and southern sides of Room IX were probably supports for the roof.[7] The projections of the wall on the eastern and western sides of Room I probably served as the support for roof-beams. In Room XI the remains of a mass of cement (pl. 1, 12) near the northern end may show the foundation for wooden beams to support the roof of this wide room. A similar feature was probably present at the southern end of the same room (pl. 1, 11), although it had fallen in, owing to the subsidence of the floor. In the center of Room X a large stone (pl. 1, 17) may have been the foundation for a wooden support.

There are several wide rooms which show no remains of the methods used to support the roof. At Teotihuacan also there are many rooms too wide to have been bridged by a single beam, and yet no pillar or wall appears at the present time.

Stairways.—There are no remains of stairways. Steps were probably necessary leading from the Eastern Terrace to the Patio on the level with Room I, provided our reconstruction is correct.

Fireplaces.—The only suggestion of a fireplace in the floor is in Room VI (pl. 1, 18; pl. 7, *b*). It is a depression lined with squared stones, and it was found filled with ashes. No remains of fire were found on the stones. Outside the eastern wall of Room XI several worked stones were found together. They seemed to have formed a part of a fireplace at this point. In the northern end of Room I, 0.5 m. above the floor, a mass of burned adobe was found, 0.4 m. thick

[7] Compare the plan of rooms excavated at San Juan Teotihuacan by Charnay ("Ancient Cities of the New World," New York, 1887, p. 145). He writes, "The center of the room is occupied by six pillars, on which rose stone, brick, or wood columns bearing the roof." It is evident from this description that the columns were not standing at the time of his explorations. Seler (op. cit., pp. 408–409) assumes that the piers were of wood when he writes, "In *Teotiuacan* kennen wir nur die unteren Theile der Wände, diese sind aber auch hier durchweg unten abgeböscht, und auch die Untersätze der Pfeiler,—die selbst vermuthlich aus vergänglichem Materiale, aus Holz, bestanden haben,—fallen regelmässig nach den vier Seiten ab."

and 0.8 m. square. Several shards of very crude pottery were lying near. In digging Pit XV, 0.9 m. below the floor of Room XI, a strip of burned adobe 2 m. long and about 0.5 m. wide was noted. Other burned adobe was found in several places in the wall of earth left between the road and the Western Terrace. Carbon and ash were found in close proximity. In almost every case these burned places were found not on the floor but either under the floor or above in the material filling the room. The first explanation is that they were places where pottery had been fired.

DECORATION.—There is no evidence of any attempt at decoration on the walls of the buildings. Remains of paint, so common at Teotihuacan, are entirely lacking here. Practically no carved stones were found.

WELLS.—Under Floor A and beginning about 3.7 m. below this floor four wells were found (pl. 2, secs. *i–j*, *k–l*).[8] The bottom of the lowest (X) is 9.25 m. below Floor A. Z is almost the same depth. W and Y are far less deep and may not have been completed. The grouping of these four wells closely together seems to show that their purpose was the collection of rain water. The water table was not reached even in Well X. It was estimated that the average water level is about 1.5 m. lower than the bottom of the deepest well. The wells were filled with earth and ashes mixed with a large number of shards. A thick bed of ash was found above the mouths of the wells similar to that found in Pits XV and XVI. Here also was a prolific source of pottery.

A flat stone (0.4 by 0.4 by 0.15 m.) was found 3.6 m. below Floor P′ and almost over the mouth of Well X (pl. 2, 23, and sec. *i–j*, *k–l*). This stone had a hole in the middle 15 mm. in diameter. The natural explanation of this perforated stone is that it served as a drain for the rain water running into the wells. The difficulty is that the hole seems too small to have served as an outlet for water. The hole may have been used for the entrance of a rope used in drawing water in a bucket from the well. No similar stones were found above any of the other wells. It is difficult to determine the time in the history of the site when these wells were used. There is no doubt that they belong to the pre-Aztec epoch on account of the figurines and shards which they contained. I have placed them in the first period of the Toltec epoch (p. 38) and suggested that they were filled and the bed of ash formed above them when the Main Structure was built.

ASH DEPOSITS.—In three distinct places in the site thick beds of ashes were found in which a large quantity of shards, and in some cases whole pots, were discovered.

[8] Batres, as noted in Seler (op. cit., p. 410), found a well at San Juan Teotihuacan measuring 0.9 m. in diameter and 10 m. in depth. It was covered with a semispherical arch of masonry and contained excellent drinking water.

Pit XVI.—The floor in the western part of Room IX was badly cracked and depressed. This subsidence extended into Room VII. This floor was removed and an excavation (pl. 2, Pit XVI; also sec. *g–h*) made at this point. We soon found a thick bed of ashes. This place had evidently been used as a dumping ground for refuse from the fires of the inhabitants previous to the erection of the Southern Extension. The weight of the building was evidently too great for the sustaining power of the ashes, and a subsidence was the result. Six tunnels were run out from the main hole in order to ascertain the extension of the ash deposit and the possible presence of lower floors.

Pit XV.—A depression in the floor of Room XI similar to that in Room IX was noted. A pillar of adobes (similar to 12 in the same room) had fallen, owing to the subsidence of the floor. An excavation (pl. 2, Pit XV; also sec. *i–j*) was made here and a bed of ashes found, as in the previous case. Two tunnels were run out, that to the north extending under a great part of Room XI. No floors or walls were found in any of these tunnels running from the two excavations.

Pits XXIV, XXV.—A third bed of ashes was found over the mouths of the four wells, as already pointed out (pl. 2, secs. *i–j*, *k–l*). Ashes also filled the wells, so that the deposition of the ash layer and the filling in of the wells undoubtedly occurred at the same time. As previously mentioned, the ashes in these three deposits and in the wells were a most prolific source of shards and several unbroken ollas. There were probably three times as many shards found in these beds of ashes as in all the rest of the site put together. They all invariably belong to the Toltec culture.

Ash stratum.—In addition to the thick beds of ashes just described, mention should be made here of the stratum of ashes found under the Main Structure, and shown in plate 2, sections *i–j*, *k–l*. This layer of ash averages 0.5 m. in thickness and is about 0.5 m. below the floor of the rooms in the Main Structure. On the southern side the stratum seems to end just inside the Terrace. On the west the ash layer is found extending to the other side of the modern road. On the north the same stratum runs under Floor B′, and on the east it ends inside the Terrace. Under Floor A a second stratum of ash runs above the first and above the level of the rooms in the Main Structure.

SEQUENCE.—It is plain that the history of the site covered a considerable period of time extending from the Teotihuacan into the Aztec culture. There are many changes, additions, and alterations in the plans and it has already been pointed out how floor covers floor and wall covers wall. The possible sequence in the erection of

the various parts will be considered after a detailed description of the site as it now appears has been made (p. 37).

REBUILDING.—It is well to consider the methods used in filling in the rooms to prepare them for others on higher levels. In most cases loose earth is employed. Sometimes, however, more pains seem to have been taken in filling in the rooms. Practically all of Room I was filled by adobe bricks up to within 0.5 m. of the present top of the hill. In a few cases ashes were noted between the adobes. Sometimes an adobe seems to have been left out and its place filled with earth. Stones are often employed for filling in over the lower floors. Room II at the entrance from Room I and in the southern end was filled by alternate layers of earth and single lines of unworked stones.

The question of the purpose of such a variety of floor levels and so evident a desire for renovation has never been satisfactorily answered. Reference is frequently made by the early Spanish writers to the desire of the natives to renew their temples and their utensils at the end of certain periods of time. This may explain in part, at least, the presence of floors separated from each other by only a few inches.

DETAILED DESCRIPTION

The natural order in the description of the site would be, perhaps, a chronological one, beginning with the lowest and earliest examples of construction and working up to the latest. A second possibility would be to work in the opposite direction, beginning with what appears to be the latest. Neither of these methods will be adopted. Leaving out of account for the present the probable sequence, I wish to begin with the most important unit, that bounded by the terrace and called the Main Structure as it appeared built over the lowermost rooms and before the topmost floor (A) was added.

MAIN STRUCTURE.—*Terraces.*—The most important building of the site rests upon a step or Terrace which is practically a perfect square, 17.5 m. on each side. The northwestern corner of the Terrace is covered by the road. The other three corners were uncovered. This step or Terrace is only 0.15 m. high and is faced by a single line of squared stones. The floor of the Terrace is of plaster and is, in most cases, well preserved. The average width on the southern, eastern, and northern sides is 0.5 m. Plate 5, *a*, shows the Eastern Terrace and plate 7, *b*, the Northern Terrace. On the western side the width is 1.6 m. There is a good floor in some places in front of the Terrace (pl. 1, U, U′, U″). At the southeastern corner this floor runs under the higher level Floor B. In two places (pl. 1, 9, 9′) a mass of cement was found on this floor and level with the top of the Terrace. Near the center of the Eastern Terrace two crater-like masses of cement (pl. 1, 10, 10′) were noted. These were undoubt-

edly at one time the foundation for beams, although it is difficult to understand what beams could have been used for at this place.

Construction.—It is interesting to note the stratification of the low mound on which the Main Structure is erected. A consistent layer of ash, about 0.5 m. thick, the top of which is about on the level of the Terrace, runs through the whole mound. This can be seen in plate 2, sections *i–j*, *k–l*. Over this is a stratum of earth and directly beneath the floors, in almost every case, a single line of adobe bricks.

Walls.—Only two pieces of the outer wall of the building are still in place. These are of stone and may show that the main wall was entirely of this material. A line of worked stones was set at an angle at the base of the wall. These appear in two places (pl. 1, 7, 7′; secs. *a–b*, *c–d*).

Patio.—The central part of the building is difficult to make out, owing, first, to the later additions of Floor A, and, secondly, to the excavation made here by a previous investigator. The northern wall of Rooms III and IV is finely plastered and is below the level of Floor A. At the base of this wall are remains of two narrow steps or floors (pl. 1, 5)[9] one slightly above the other. The same two narrow steps or floors and the plastered wall behind are noted to the south of Rooms V and VI. It seems probable that at a time before Floor A was built with its stone supporting walls a floor or floors ran across the space called the Patio connecting these steps or floors (pl. 1, 5, 5′). This floor would have been at the same general level as that of the other rooms of the structure and formed a kind of court or patio open, in all probability, on the eastern side. Plate 5, *b*, gives an idea of this shelf-like floor on the north and shows how it has been broken off by the erection of Floor A. Another feature which strengthens the supposition that there was once a floor at the general level of Rooms I, III, IV, V, and VI over the central portion of the structure is the stratification below Floor A. The stratum of ash running under all the rooms (pl. 2, sec. *i–j*) is continuous over the central space and is now visible under Floor A.

From the Patio the main entrance to the building would have been on the eastern side of Room I. Another piece of evidence in favor of the idea of a floor over the Patio at the level of Room I is furnished by a small piece of plaster flooring attached to a line of worked stones (pl. 1, 3) forming a part of the eastern side of Room I and set almost flush with the floor. This bit of floor indicates that the floor of the Patio was slightly higher than the floor of Room I (pl. 4, *a*). The line of stones runs under the stone wall which projects into

[9] It is interesting to note that in the underground rooms excavated at Teotihuacan a similar feature to these step-like floors is found on the walls of a room 5 m. above the present floor.

Room I, indicating that this wall was a part of a later construction and probably the support of Floor A.

Room I.—This is the main room of the structure. The western wall is well preserved and the plaster covering the adobe is still to be seen in many places (pl. 4, *b*). The floor is also well preserved. There is a curious break in the plaster of this floor, running around nearly the whole room. The floor near the walls is slightly higher than that in the middle of the room (pl. 1, sec. *a–b*). The uniform break in the floor may be due to the destruction of a low step connecting the higher floor near the walls with the floor in the middle. This is the only explanation I can suggest to account for the even break around the room.

The projections in the western wall of Room I were probably intended to lessen the distance to be bridged by the roof-beams. At either end of the room the floor clearly indicates the former presence of a single pillar. Similar supports are very frequent in the plans of the rooms excavated at San Juan Teotihuacan. The width of the outside rooms made at the northern and southern end by the pillars is not equal, as may be seen on the plan. It is impossible to know to a certainty whether there was an entrance to Room I at the northern and southern ends. I have indicated in the plan no break in the outside wall of the building at these places.

Room II.—Opening from Room I on the west through a well-defined doorway is Room II. The original floor of this room is marked D (pl. 1) and is the same level as the floor around the sides of Room I. At the western side and at both ends of the room is another floor (C), at a slightly higher level than Floor D (pl. 1, sec. *e–f;* pl. 8, *c*). A narrow strip of the original floor (D) runs out to the northern wall of the room in the northeastern corner. It seems probable that the floor on the lower level once covered the entire room. The second floor, as will be pointed out later, was probably built to connect with Floors B and B′ on the south and north, which are of the same level.

Rooms III, IV (pl. 5, *a*).—Opening from the southern end of Room I is Room III, and from this in turn opens Room IV. The floor is entirely gone from Room III and only partially preserved in Room IV. The outer facing of the northern wall of these two rooms is still in place.

Rooms V, VI (pl. 5, *b*).—Corresponding to III and IV on the south, Rooms V and VI open from Room I on the north. Room V is the best preserved of any of the rooms in the building. Near the center of Room VI there is a square formed of worked stones set flush with the floor (pl. 7, *b*). This was found filled to the depth of 0.5 m. with ashes. This has previously been called a fireplace. No shards were found in connection with the stones.

Floor A.—Of the area included in the Main Structure there remains to be described the highest floor (A) and its sustaining walls of stone. The relation of this floor to Room I is best seen in plate 1, section *e–f*, and plate 5, *a*, *b*. As has been pointed out, the ever-present stratum of ash runs under this floor. Above this ash there are in turn a narrow stratum of earth, a second layer of ash, a thick stratum of earth, and a single row of adobe bricks, which comes under the floor itself (pl. 2, sec. *i–j*). This floor originally covered the greater part of the space I have called the Patio, leaving a narrow space on the north and south between it and the walls of Rooms III, IV, V, and VI. The floor is supported on the southern and northern sides and the southwestern and northwestern corners by stone walls, which were probably built on the former floor of the Patio. Worked stones, forming the base of the wall, still remain on the northern side (pl. 1, 6), showing that the floor did not extend over Rooms V and VI. The buttress-like stone construction (pl. 1, sec. *e–f*) on the western side, near the northwestern corner, and duplicated, in all probability, near the southwestern corner on the same side, are built up from the floor of Room I and seem to show that the highest floor (A) was built at a time when Rooms I and II, together with the lateral Rooms III and IV, were not filled in. It is impossible to account for the fact that there is no stone wall in the center of the western side of Floor A and it is difficult to understand the purpose of the angles made by the stone walls in the northwestern and southwestern corners.

Only a small portion of Floor A remains. The greater part was destroyed by the former visitor to this site. Two layers of adobe bricks, some of which measured 0.27 by 0.27 by 0.12 m., were found in many cases still in place over the floor. The outer walls of the room or rooms of which this floor is a part are not to be made out. The floor on the western and northern sides runs to the very edge of the stone wall beneath. Two breaks in the floor (pl. 1, 1, 1′; pl. 8, *b*), with the characteristic upward slope of the floor itself, indicate two pillars of adobe. A longitudinal break in the floor (2) may indicate a former wall of a small room. The upward slope of the floor on the western, northern (pl. 1, 8), and eastern sides of this small room shows clearly that there was a wall starting from the floor itself at these points.

Floor A′.—Two small pieces of floor (A′) high up on the wall of earth left between the Western Terrace and the road (pl. 1, sec. *e–f*) show that a floor at this high level formerly extended along the western side of the site. The first thought is that this floor is similar in point of time to Floor A just described. The former is very slightly higher, however. The fact that Room I and a great

part of Room II were filled in solid with adobes up to the level of Floor A lends strength to this supposition. Both Floor A and Floor A′ were only slightly below the former level of the hill. Plowing might easily explain the destruction of the greater part of this portion between. If this idea is accepted, the question difficult to answer is, Why were the stone walls with the buttresses built to sustain Floor A if this floor extended to the west over Rooms I and II?

Continuation of terraces.—Following a description of the Main Structure, some mention should be made of additions to the Terrace on the southwestern and northwestern corners. These were probably built subsequent to the erection of the Northern and Southern Extensions, showing, in all probability, that the Main Structure and the Extensions were occupied at the same time.

Room X.—This is on the south and is an addition to the Terrace floor in the southwestern corner. The plaster of the floor covers the top of the stone facing of the Terrace and the floor was clearly built over the depressed Floor H (pl. 6, *a*). In the center of Room X a large stone (17) was found resting on the floor. It was worn smooth on the top. It may at one time have formed the base of a timber support. A wall has been indicated along the southern and western sides of this room. That on the west is made evident by three worked stones (16) forming the outside facing of the wall. On the southern and eastern sides the floor runs to the edge with no trace of a wall. On the south a wall of earth was left in place (pl. 7, *a*), as 0.25 m. above the floor three small pieces of a higher floor (J) were found. These are similar in height to a piece of floor (J′) found to the west of the Western Terrace. This floor is difficult to explain. The only suggestion that can be offered is that J and J′ are the remains of a former floor on the south and west corresponding in height to Floor M on the north. It seems probable that in addition to the continuation of the Southern Terrace floor now seen in Room X the entire floor of the Southern Terrace was extended under Floor B well up to the northern wall of Room XI. Proof of this is given in the remains of plaster from a broken floor found under the higher level Floor B and at the same height as the floor of the Terrace (pl. 2, sec. *i–j*).

Floor G.—This is another addition to the Terrace at the southwestern corner. Here, as in the previous case, the floor is flush with the top of the stones facing the Terrace. This floor extended under the road.

Room XII (pl. 6, *b*).—An addition to the Terrace on the northwestern corner, corresponding to Room X on the southwest, should be noted. The plaster just covers the top of the facing stones. The northern end of this room is not known, as it is covered by Floors M

and B′. It is clear that it extended to the west under the present road.

As on the southern side, there is evidence of a plaster floor under B′ (pl. 2, sec. *i–j*), showing that the entire Northern Terrace floor once extended some distance to the north. Floor U′ in front of the Terrace on this side was covered by adobes to the level of the Terrace floor.

Floor on east.—The Eastern Terrace floor was also probably extended in the same way as on the other three sides, as remains of a floor corresponding in height to that of the Terrace are seen in the earth left in place on the eastern side of the excavation. These continuations of the floor of the Terrace on all four sides would greatly enlarge the area of the Main Structure. There were no stones found marking the edge of the extended Terrace.

SOUTHERN EXTENSION.—Rooms VII–XI (pls. 6, *a*; 7, *a*) are a unit and quite distinct from the Main Structure. This part of the site was probably used for refuse when the latter was built. It is here that we found the beds of ashes (pl. 2, Pits XV, XVI) containing a large number of shards. The rooms of the Southern Extension are built over these ash deposits.

Room IX.—This is the main room in this part of the site. A line of five pillars ran around the southern and eastern sides, probably supporting a roof. These columns had fallen, but they are clearly indicated on the floor (pl. 6, *a*). The central part of the room may not have been roofed over. In the excavation of this room a mass of adobe (pl. 2, 13) was found near the center. This had not been removed when the photographs were taken and is seen in plate 6, *a*. Later this was taken up, and it was found that the floor runs under it with no break.

Room X, attached to the Terrace of the Main Structure, was built, as already mentioned, after the Southern Extension, as Floor H runs under it. Floor H is slightly depressed (pl. 6, *a*), and the line of depression is marked by worked stones. As it was not thought best to remove the upper floor, and as there was no room for tunneling, Floor H could not be followed out.

Floor K, on the northern side of Room IX, slopes upward and was probably once attached to Floor U″, extending in front of the Terrace.

A part of the northeastern wall of Room IX is covered by the western end of Floor B. The end of the wall widens out, and on the northern side there is a decided slope to the wall similar to many at Teotihuacan. At the northeastern corner the wall overhangs (pl. 8, *d*), also a feature at Teotihuacan.

The western side of Room IX is more or less indefinite. There was undoubtedly another large room to the west extending under the

present road. Floor F is 0.7 m. higher than the floor of IX and at one place is lined with stones (pl. 1, 14). It was built after Room IX, as Floor H runs under the edge of F. The remains of a wall set in plaster were noted along the eastern edge of Floor F. This is not shown in the plan.

Rooms VII, VIII.—The first opens from IX on the south. Excavations were made to the south of these rooms, but nothing was found. The floor at the southwestern corner of Room IX was badly broken by subsidence. This extended into VII. This sinking of the floor was due, as already noted, to the thick bed of ash beneath. It was at this point that Pit XVI was dug. Room VIII opens from Room VII and has no connection with Room IX.

Room XI.—The room second in importance in the Southern Extension is Room XI, opening from Room IX by a clearly marked doorway (pl. 6, *a*). The northern side of the northern wall is covered by Floor B. Tunnels *a* and *b* (pl. 2) show, however, the northern face of the wall. There is a slight projection of the wall on the southern side. On the western wall, some distance to the north of the doorway into Room IX, a semicircular depression is noted running from the floor to the present top of the wall. It was evidently filled at some time with a post. In the center of the northern end of Room XI there is a mass of plaster mixed with large stones (pl. 1, 12), which may have been the foundation for a post to support the roof. A broken mass of adobes was noted at the southern end of the room (11), but this had fallen into the depression made by the subsidence of the floor due to the thick bed of ash beneath. The floor was removed, as stated in another place, and Pit XV was made here.

Floor E, a curious high-level construction, was found at the southeastern corner of Room XI (pl. 7, *a*), 0.84 m. above the floor of XI. Only a narrow piece of the floor is preserved and it ends abruptly on the northern side with no evidence of a wall. The remains of a narrow wall are found on the western side extending out beyond the southern limit of Room XI. The floor of the latter room runs behind this piece of higher floor.

In excavating the northern end of Room XI two small pieces of floor were found at the same level as Floor J to the south of Room X. Some squared stones were also seen near the eastern wall of this room above the floor. These two features are not shown in the plan. Outside the eastern wall of XI three pieces of a rough floor were found (pl. 1, L, L′, L″). Excavations were made along this wall but no remains of a room or rooms were noted. These rough floors may have extended around the outside of the building. At the southern side of Floor L″, on a level with the floor of XI, the remains of a stone fireplace appeared.

NORTHERN EXTENSION.—The arrangement of rooms on the north of the Main Structure is not symmetrical in plan nor similar in level to those of the Southern Extension. That to the south is slightly lower than the level of the Terrace, whereas the Northern Extension is slightly higher than the Terrace (pl. 1, sec. *a–b*). This extension was destroyed to a great extent when Floor B′ was built.

Floor M.—This is constructed over a part of Room XII and is 0.31 m. above the floor of this room. At one place the edge of M is marked by several worked stones (pl. 1, 17; pl. 6, *b*). Floor M was at one time probably a room extending under the road to the west. The wall on this floor, noted in the plan and set at a decided angle, is a very late addition. It is of earth with two horizontal lines of stone running through it. Floor N is of the same level as M.

Room XIII.—The northern side of this room is difficult to make out and is therefore indicated by dotted lines. The walls of this room make a break in Floor N. Pit XXIX was made in the northwestern corner of this room. No floors were found underneath. There is a break between Floors N and O, the latter being 0.1 m. lower. At the northern end of O (pl. 1, 20) a burial was found.

HIGHER LEVEL FLOORS.—A perplexing feature of this site are the two high narrow floors, B and B′, running the length of the northern and southern sides of the Main Structure. The height of these floors relative to that of the other floors is seen in plate 1, sections *a–b*, *c–d*, and plates 5, *b*, 6, *b*, 7, *b*.

Floor B (pl. 5, *a*).—This starts on the east at a point well beyond the eastern edge of the Terrace on this side. It is built over the floor in front of the Terrace at the southeastern corner and covers the northern wall of Rooms IX and XI. There are no remains of wall surrounding the floor and it ends abruptly on all sides. The construction of Floor B can best be seen in plate 2, section *i–j*. The greater part of the foundation for this floor is of adobe bricks with a stratum of earth above and another beneath. Just below the adobes the earth is mixed with remains of plaster on the same level as the top of the Terrace. This continuation of the floor of the Terrace has already been discussed (p. 30).

Floor B′ (pl. 7, *b*).—This is almost exactly similar to B in its relative position, height, and size. It is built along the northern side of the Main Structure. It does not extend as far to the east as B. A short piece of stone wall (pl. 1) appears on the southern side of this floor and may show that a wall once surrounded these long narrow floors. The foundations of B′ are quite unlike those of B. In the latter adobes form the greater part of the support. Here in B′ (pl. 2, sec. *i–j*) the floor rests upon a single row of adobes. Below this there is a wide stratum of earth mixed with

large stones beneath which is a thin line made by the remains of the plaster floor, already pointed out (p. 30), of the same level as the floor of the Terrace. This broken floor rests upon a layer of adobes. Below this we find, in turn, plaster mixed with earth, the consistent stratum of ash, and, finally, earth.

Floor C.—Between the western end of Floor B′ and the northern end of Floor C, the higher of the two floors in Room II, and at the same level as Floor C, a few pieces of plaster flooring were found. This clearly establishes a connection between C and B′. This is not indicated in the plan. We find that B, B′, and C are of the same level. C was built, as already pointed out (p. 28), over Floor D. There are several indications in the wall of earth left between the excavations and the road that this Floor C once extended some distance to the west beyond the line of the Western Terrace. We can assume, I think, that the western end of B was attached to the southern end of C just as we have found proof of the attachment of the northern end of C with the western end of B′, thus forming a continuous floor around three sides of the Main Structure.

Floor on east.—With this floor running around three sides we sought for remains of a similar floor on the east. In the earth left in front of the Eastern Terrace a distinct stratification is noted (pl. 2, sec. *k–l*). On a hard floor of adobes there rests a thick stratum of large stones. On the top of this layer of stone pieces of plaster were found, evidently from a floor. The level of this plaster is almost exactly equal to the level of Floor B, C, and B′. It has already been pointed out that earth freely mixed with large stones forms the main part of the foundations of Floor B′. We therefore have for this postulated floor on the eastern side a foundation similar to B′ on the north. It is therefore more than probable that, surrounding the Main Structure, there was at one time a continuous floor on all four sides, making, possibly, the step or terrace of a pyramidal structure. At the time this floor was built the depression made by the Terrace on the north and south was filled in. The remains of a floor on the eastern side were noted in the earth removed over the Eastern Terrace and this floor probably ran to the stone wall postulated on the eastern side of the Patio.

Lowest floors.—As already pointed out, our one aim in the excavation of this site was to preserve all the floors and walls found still in place. It was therefore impossible to study exhaustively the lowest floors, as these were covered in every case by the rooms of the Main Structure. Tunneling was unsatisfactory as the distance between the two floors is in most cases only about 1.25 m. Under these conditions it was not found possible to establish the plan of the

rooms for the lowest levels of the site. A description of the floors found and, in a few cases, the walls will alone be attempted. The lowest floors are far less well preserved than those above. They are usually very uneven and vary much in thickness. There are many breaks which can not always be explained. The tunnels and the floors found are shown in plate 2.

Floors in Tunnels n–p.—The lowest construction apart from the wells is under a part of the Northern Terrace running to the north under Floor B′ (Tunnels *n–p*). At this place there was clearly a room the dimensions of which could be ascertained with some certainty, 3.7 m. east and west and 3.1 m. north and south. The southern side of the room in Tunnel *o* is marked by the remains of a stone wall, one of the few cases where the wall of one of the lowest rooms may be studied. The limits of the western side of the room are shown in Tunnel *n*, while the eastern side of the room is in Tunnel *p*. The edge of this floor is clearly marked by a line of worked stones set flush with the floor. There is a decided rise in the floor at the northeastern corner.

Floor P.—From the southwestern corner of the room just described and 0.7 m. above it begins a curiously wandering floor (P″) in Tunnel *l* under Room V. This floor is uneven and very narrow. It is impossible to determine the dimensions or character of the room of which it was a part. The floor continues under Floor A (P′). The western side is still marked by two stones (pl. 2, 22) set at the edge. Here also are two round elevations in the floor (21, 21′; also pl. 2, sec. *i–j*) formed by stones set in plaster on the surface of the floor. No explanation can be offered for these protuberances. The same floor (P) continues into the open cut made to the south of Floor A and, turning westward, enters Tunnel *f* (P^3). It is here hardly more than a plaster-covered wall separating Floors Q and Q′. Still continuing westward in Tunnel *e* (P^4) it comes out in the open Pit XVII and is lost under the wall of earth left between the excavation and the modern road. P^5 is probably a part of the same floor in Tunnel *h* and separated from P^4 by a break. The eastern side alone is visible in Tunnel *h* until Tunnel *i* is reached, when the western side is marked by a break separating it from another piece of floor (P^6) at the same level. This floor, starting under Room V and continuing under the northwestern corner of the Patio and under Rooms I and II, covers so large an area that it may at one time have been continuous under all the central part of the site.

Floor R.—This is a small piece of plaster flooring in Tunnel *f* under one of the stone buttressed walls on the western side of the Patio. This floor is 0.15 m. below P^3. The lower floor, Q, bounds it on the west while the northern side ends at the edge of the higher

floor P. The southern side is marked by a line of worked stones which extend into the central excavation (pl. 1, 4, and sec. *c–d*).

Floor Q.—This is a third floor on a different level in Tunnel *f*. It is 0.3 m. below P and 0.15 m. below R. The southern side is seen at the entrance to Tunnel *f* from Tunnel *e* and is here marked by a line of worked stones, a continuation of those forming a side of Floor R. Q′, in Tunnel *g*, is probably a part of the same floor and is separated from Q by the higher and narrow Floor P[3]. The eastern edge of Q′ in Tunnel *g* is clearly marked by a sharp rise in the floor level seen in most cases at the edge of a room. A part of the western side of Q′ is seen in the tunnel connecting *g* and *h*, which also shows the sharp edge of the higher Floor P[5]. The Floor Q and Q′ indicates more nearly the floor of a room than any of the other floors under the Main Structure.

A floor of tepetate is noted in Tunnel *d* (pl. 2, sec. *i–j*) on the same level as Floor Q. A small piece of floor (S, pl. 2, sec. *g–h*) under P[4] should be noted. This was found in Pit XVII. Its limits were not ascertained.

No floors were found in Tunnels *j*, *l*, and *m*. It is also well to note that no floors were found under the Patio with the exception of P on the western side.

Niches in Tunnels e, h.—In the northern wall of Tunnel *e* (pl. 2, 24) and again in the western wall of Tunnel *h* (25) a curious niche-like construction was found. A squared stone, 0.45 by 0.45 m., formed the base of the depression in Tunnel *e*. The walls, composed of small stones set in adobe, met 0.52 m. above the stone, making a sort of beehive-shaped cubicle. This contained nothing. These two niches were found almost exactly under the western edge of Floor D in Room II. It is suggested that possibly the western side of D was at one time the extent of the Main Structure and these cubicle openings were on the side of the outer wall of the building upon the Western Terrace. There are two other pieces of evidence which may go to show that the floor of the Terrace on the west was wider than is now indicated. Floor T, in the northern end of Tunnel *h*, is on the same level as the floor of the Terrace and of the same composition. In Pit XVIII (pl. 2, sec. *k–l*) a floor (27) of the same level as that of the Terrace is found running under the western wall of Room II.

As already pointed out (p. 19), the lowest Tunnel, *y*, running from Pit XXI on the west to Pit XVII and Tunnel *z* branching from *y* and running into Pit XXIV show no floors of any kind. The only remains found in these lowest excavations consisted of a square piece of tepetate 0.7 by 0.7 by 0.5 m. near the top of the wall in Tunnel *y*, 4.5 m. east of Pit XVII, together with a few shards and one pottery head.

SEQUENCE

It is impossible to state definitely the order of the construction of the different parts uncovered in this excavation. It seems almost certain that the history of the site extended over a considerable period of time. There were constant changes. Renovation seems to have been the watchword, floors built over floors with or without a previous destruction of the work underneath. The reader can well understand by this time the perplexing character of the details in the successive plans. It has already been intimated that the conditions here as regards floor built over floor are not by any means unique. In almost all cases where excavations have been made in the area included in Middle America there is this persistent phenomenon of different floor levels.

By a careful study of all the data it is possible to give some idea of the approximate order of the building. There are many features which must remain forever obscure. The perishable nature of the adobe and earthen walls accounts for much natural destruction. This, coupled with activity of the inhabitants to rebuild and renovate, makes the task of establishing the history of the building a most difficult one. A small piece of floor perhaps not more than a few inches square seems hardly large enough to furnish proof of the supposition that a floor at this level once covered a large part of the site, and yet this square bit has to be fitted in as a part of the history.

Starting with the lowest floors the following sequence is offered only as a suggestion of the probable order in the building of the site:

PERIOD I (pl. 2)—

1. Floor and walls in Tunnels *n*, *o*, *p* under Northern Terrace.
2. Floor Q, Q′ in Tunnels *f*, *g*, under Rooms I, II.
3. Floor R in Tunnel *f*.
4. Floor P–P^6 in Tunnels *e–k* under Rooms I, II, Patio, and Floor A.

Four wells used during this period.

PERIOD II (pl. 1)—

Main Structure surrounded on four sides by Terrace and floor (U, U′, U″) in front of Terrace.

Wells probably filled up.

Refuse piles of ash made during this period.

PERIOD III—

Southern Extension with Rooms VII–IX, XI.

Later, Floor F.

PERIOD IV—

Additions to floor of Terrace (1) along eastern side of Room X and remains of floor under B, (2) on west by Floor G, (3) along northern side by Room XII and remains of floor under B′, (4) on east by floor of the same level as that of the Terrace.

PERIOD V–

Northern Extension with Floors M–O, Room XIII, and possibly the same floor level extending on the west and south, as shown by J′ and J, the latter to the south of Room X.

PERIOD VI—

Floors B and B′. Floor C on the west and remains of a floor on a similar level on the east.

PERIOD VII, the first Aztec remains—

Wall set at angle over Floor M.

Floor E in southeastern corner of Room XI.

PERIOD VIII—

Floor A, the highest floor, over Patio with stone supporting walls on the four sides.

PERIOD IX—

Rooms I and II filled in and Floor A extended to the west to A′.

PERIOD I.—This has been subdivided according to the various levels of the floor. (1) The floors in Tunnels *n*–*p* are 0.7 m. below Floor P″, but the floors do not in any way overlap each other. (2) Floor Q is 0.3 m. below P^3 and was probably broken by the building of the higher floor. (3) Floor R is 0.15 m. below P^3 and 0.15 m. higher than Q. (4) Floor P–P^6, as indicated above, is the highest floor of those placed in this period.

The four wells (W–Z) were probably dug at about the time that the floors under Rooms I and II were made.

PERIOD II.—The Main Structure is a unit and is the most definite of all, owing to the Terrace on the four sides. There are two indications that the Northern Terrace was at one time wider than is shown in the plan with a consequent result that Room II was narrower, possibly only the width of Floor D. Floor T, in the northern end of Tunnel *h*, is the same level as that of the Terrace and of the same character. Also in Pit XVIII, a floor (27) of the same level as that of the Northern Terrace is found under the western wall of Room II. The four wells may have been filled up during this epoch. The refuse piles were probably made at this time (Pits XV, XVI, XXIV).

PERIOD III.—The Southern Extension was subsequent to the erection of the Main Structure if our supposition is correct that the refuse piles in Rooms IX and XI were made in the preceding epoch. There is no reason to suppose, however, that the Main Structure did not continue to be occupied after the Southern Extension was built. The two were probably joined by the Floor K and U″. I have placed here in Period III Floor F, built along the western side of Room IX. It is undoubtedly later than Room IX, as the floor of the latter runs under F.

PERIOD IV.—The Terrace was eliminated by filling in in front of the stone facing and thus extending the floor of the Terrace over and beyond the facing stones. A solid mass of adobes was often found

in front of the Terrace and level with the floor. This is noted especially over the northern side. The extension of the floor of the Terrace in the southwestern corner (Room X) destroyed a part of the Southern Extension and especially Floor H over which Room X was built. But there is little reason to suppose that Rooms IX and XI were abandoned at this time. The floor of the Southern Terrace, other than in Room X, reached in all probability the northern wall of Rooms IX and XI. It could not have extended to the south of this wall, as the wall is still in place under Floor B. It is impossible to tell how far the widened Terrace floor extended on the western, northern, and eastern sides. On the north the Terrace was extended by building Room XII and the floor under B′. On the east the remains of a floor appear to show that the Terrace was extended on this side.

PERIOD V.—The Northern Extension is clearly later than Period IV, as Floor M is built over Room XII, the addition to the Terrace floor at the northwestern corner. Floor M runs up to the walls of Room XIII, as does also Floor N, showing that they were contemporaneous. I have included in this period Floor J, to the south of Room X and slightly higher than the floor of this room. Floor J′, a small piece of floor found above the floor of the Western Terrace, should also be included. Both J and J′ are of the same level as M, N, and O. There should be mentioned in connection with these floors the remains of two small pieces of plaster found in excavating the northern end of Room XI. These are of the same level as Floor J. It is suggested that a floor of this level covered at one time the western and southern sides of the site.

PERIOD VI.—This is marked by a decided change in the plan of the site. The higher level floors which come in this epoch are built almost entirely over earlier constructions. The Southern Extension was probably filled in, as Floor B is built over the northern wall and also runs over the floor in front of the Southern Terrace. Floor B probably ran to the west over Room X. Floor B′, on the north, was built over Room XII and probably over Floors M–O, which may at one time have extended under B′. There is difficulty in determining the relation of Floor C, which in this period connected B with B′, with Floor D, the original floor of Room II of the Main Structure. It is probable that Floor C once entirely covered Room II. In excavating Room I a small piece of plaster floor was found near the southwestern corner, 0.27 m. above the main floor. This would be about the height of Floor C in Room II. This latter floor, the connection between B and B′, may not only have covered the entire Room II but may have once extended into Room I. I have tried to show elsewhere (p. 31) that the square formed by B, C, and B′ was completed on the east by a floor the remains of which are

found above the stratum of stone on that side. It is not improbable that at this time the space between Floor B and Rooms III and IV and the southern end of Room I was filled in over the floor of the Terrace. In the same way the Northern Terrace was covered by the filling between the high level Floor B′ and Rooms V and VI and the northern end of Room I. There is some evidence to show that the high level floor on the east ran to the eastern wall of the Patio, thus covering the Eastern Terrace. All this would greatly enlarge the area of the Main Structure by making these high floors on the four sides a part of the building which had already been increased in area by the additions made in Period IV.

Period VII.—As has already been noted, it is impossible to differentiate with absolute certainty the floors and walls made by the Toltecs from those erected by the Aztecs. The site was probably occupied continuously from one culture to the other. From a study of the distribution of the different types of pottery and figurines it seems probable that the site was occupied by people of the pre-Aztec or Toltec culture up to about the end of Period VI. The changes which are noted in the succeeding periods were made, in all probability, by the Aztec people. Period VII is comparatively unimportant and is not marked by any sweeping changes in the plan of the site. In this sequence which has been suggested, I have placed in this period the wall set at an angle over Floor M in the northwestern corner of the excavation. This floor was covered with débris when the wall now found over it was built. This wall also extended over Floor B′. It is the only construction in the whole site which does not show a more or less careful orientation.

The elevated Floor E at the southeastern corner of Room XI has also been placed in this period. There is no proof that the walls over Floor M and Floor E were built at the same time, but they both evidently belong to the Aztec period and are insignificant changes compared with those which have been placed in Periods VIII and IX.

Period VIII.—Floor A is important as it is marked by the most sweeping changes in the plan of the Main Structure. This period almost certainly belongs to Aztec times, as much Aztec pottery was found in connection with this floor. Around the Patio a stone wall was built and the space between filled in to support Floor A. There are some grounds for thinking that Rooms I and III–VI still continued to be used after Floor A was built. The straight lines of Floor A on the western and northern sides make it appear as if these were at one time, at least, the limits of the floor. The stone buttresses of the wall on the western side of A would not have been needed if the floor had extended to the west over Room I.

Period IX.—This is the last epoch in this suggested sequence in the history of the site. Rooms I and II were filled in together, in all

probability, with all the other rooms of the Main Structure. Room I, as has already been pointed out, was filled with adobes. Between and above the adobes over the whole extent of this room Aztec types of pottery and figurines were found. Floor A′ on the western side is the remains of a floor which may have covered the greater part of the site and connected with Floor A in the center. Remains of a layer of tepetate in some places high up in the filling of Room II may indicate this highest floor level, as tepetate was often used in place of adobes immediately under the floors.

There may have been still another floor over A, as two layers of adobes were found covering the greater part of the floor.

Emphasis must again be laid on the fact that the divisions into periods is only suggestive. There is often opportunity for several interpretations of the floor levels. A knowledge of other sites of this character in the Valley of Mexico would be a great help in deciding many unsettled points. No attempt has been made to hazard a guess as to the length of time for any of the periods.

ARTIFACTS

All the objects found in this excavation are in the Museo Nacional in Mexico City. Unfortunately it was necessary to leave Mexico before a complete study of the collection could be made. This part of the report has been written, therefore, from notes and drawings but without any of the collection at hand.

In discussing the objects from this mound it may be assumed that the various artifacts belong to the Toltec culture unless special mention is made to the contrary. The objects of Aztec culture are comparatively few in number and relatively unimportant. A few things which are clearly pre-Toltec or Archaic were encountered. These are sporadic and do not indicate that the site can be dated back to the time of the earliest occupation of the valley. Attention is called to the list of illustrations (pp. 11, 12), where there is given, as accurately as possible, the location of many of the objects.

SKELETAL REMAINS.—The human remains were not numerous. In no case was a burial found in direct connection with objects. In Pit XV, 2.35 m. below the floor of Room XI, a skeleton was found. Owing to the subsidence of the ground at this place the bones were not in place. In Floor O, 1.10 m. outside the eastern wall of Room XIII, 1 m. from the surface, a second skeleton was found resting on the adobe floor. The head pointed toward the west and the body lay on its back with the legs flexed. At the crossing in Tunnels *h* and *i* charred human bones were found mixed with charcoal. A few scattered human bones came to light in excavating the wells.

Remains of animal bones were not uncommon in the ash deposits. They were very rare, however, in other parts of the site. It is to be regretted, for reasons stated before, that there was no opportunity for further examination of the skeletal material.

STONE OBJECTS.—The stone objects were very few in number and comparatively unimportant. They include obsidian points and cores, rough flakes of obsidian, three quartz spear points, several handled rubbing stones and pestles of tufa, a few pieces of broken metate, two beads of serpentine, and a single stone with engraved lines upon it.

SHELL OBJECTS.—The only shell objects were a perforated pendant and some small pieces of mother-of-pearl.

HUMAN FIGURINES—*Archaic type*.—This horizon is very poorly represented in this site. As already pointed out, there seems to be no ground for thinking that the history of the site goes back to the time of the Archaic period. The figurines and pottery belonging to this culture were found in close contact with a far larger number of objects clearly to be assigned to the Toltec period.

The only unmistakedly Archaic body is shown in plate 9, *a*. It came from the Tunnel under Room II. Plate 9, *b*, may possibly belong to the same type. Plate 9, *c*, is an unusual form. It is painted yellow and came from the ash stratum above the wells. It is undoubtedly Toltec. A seated figure with the typical eyes of the Archaic period is shown in plate 9, *d*. Other heads from this culture are shown in plate 9, *e*, *f*. The latter appears to belong to the "transitional type."

Toltec type.—A surprisingly small number of the typical Toltec heads was found. These occur, however, in large numbers in the immediate vicinity of the site. Of those found, the following were the most striking: A head with deep holes on either side of the forehead for the attachment of some extraneous decoration (pl. 10, *a*), the typical Toltec seated figure with the "spectacled eyes" (pl. 10, *b*), a head attached to a body (pl. 10, *c*), and two examples of Xipe, the god of the flayed skin (pl. 10, *d*, *e*).

Coyotlatelco type.—A variety of Toltec figurine most frequent here has, I think, seldom been described (pl. 11, *a*, *b*, *c*). It is not found, as far as I know, at San Juan Teotihuacan, and I have seen only a few of this type from the Atzcapotzalco area outside of the site here described. It consists of a complete body, much thinner than the usual Toltec figurine, and characterized especially by a sharp-pointed nose. The face is usually painted red, together with parts of the dress, and the simple headdress is sometimes yellow. The faces of these figures were probably not always made in molds. Portions of 25 of these figurines were found in Pit XVI and 7 in Pit XV. I have called this variety of figurine the Coyotlatelco subtype. There

are many local differences in some of the Toltec figurines, in spite of the fact that many types are identical, whether found at San Juan Teotihuacan or in the Valley of Mexico.

The usual types of arms and legs, many of them perforated for attachment to bodies, are well represented at this site.

Aztec type.—Heads of this type are very few in number. Plate 12, *a*, shows a head with a typical Aztec headdress found well above the floor of Room IX and the head on plate 12, *b*, came from above the floor of Room II. Plate 12, *c*, *d*, shows a female form with curious indentations above the breasts. These are Aztec and were found with several others above Floor A. They are not uncommon in other parts of the valley. An extremely crude head is shown in plate 12, *e*. As it came from the ash deposit beneath Room XI it probably dates back to the Toltec period. Plate 12, *f*, is a grotesque with open mouth and bulbous nose.

Animal figurines.—There is a comparatively small number of animal forms. Plate 12, *g*, shows what appears to be the head of some animal attached to a body. The upper legs are broken off. The body is perforated at the bottom for the attachment of the lower legs. Plate 12, *h*, is an owl design, more common as a form of headdress in the Toltec figures. Plate 13, *a*, is evidently an ocelotl and is painted red. The point of attachment to an olla is behind the head. This as well as the owl head is from the Toltec culture. Plate 13, *b*, *c*, are probably heads of deer. The latter is clearly Aztec. It was once attached to the edge of an olla (see Boas Album, pl. 59, 7). Plate 13, *d*, has the head of an animal, although the teeth appear human. An interesting type of animal figurine is shown in plate 13, *e*. Several of these were found. The body is hollow and some of them show four perforations near the bottom, evidently for the attachment of legs. They are Aztec. Serpent heads (pl. 13, *f*) are common. They are from the Aztec culture and form in most instances the ends of the handles of incense burners.

"Adornos."—The term "adornos" has been given to the clay figures which are usually combined in large numbers to form large incense burners. Señor Gamio, working under the auspices of the School near Atzcapotzalco, was fortunate in finding two of these braseros complete. They consist of a large dish on a stand together with a cover. From the top of the cover there extends a chimney which furnishes a draft for the burning incense within. On this chimney as a foundation there is built up a superstructure of flat pieces of clay around a human face in the center. On this framework a large number of the adornos are attached. These decorations are all made in molds. The most common forms are rosettes with or without an open center, representations of feathers, tassels, shells,

and bird forms. No brasero was found complete at this site but a large number of the adornos appeared. Plate 14 shows one of these braseros found at Santa Lucia. It belongs to a private collection. This type of brasero and its ornaments belong to the Toltec culture and seems to be typical only in this vicinity. Figure 1 shows some of these ornaments. Remains of red and yellow paint are very common on these pieces. The central feature of these braseros is the face in

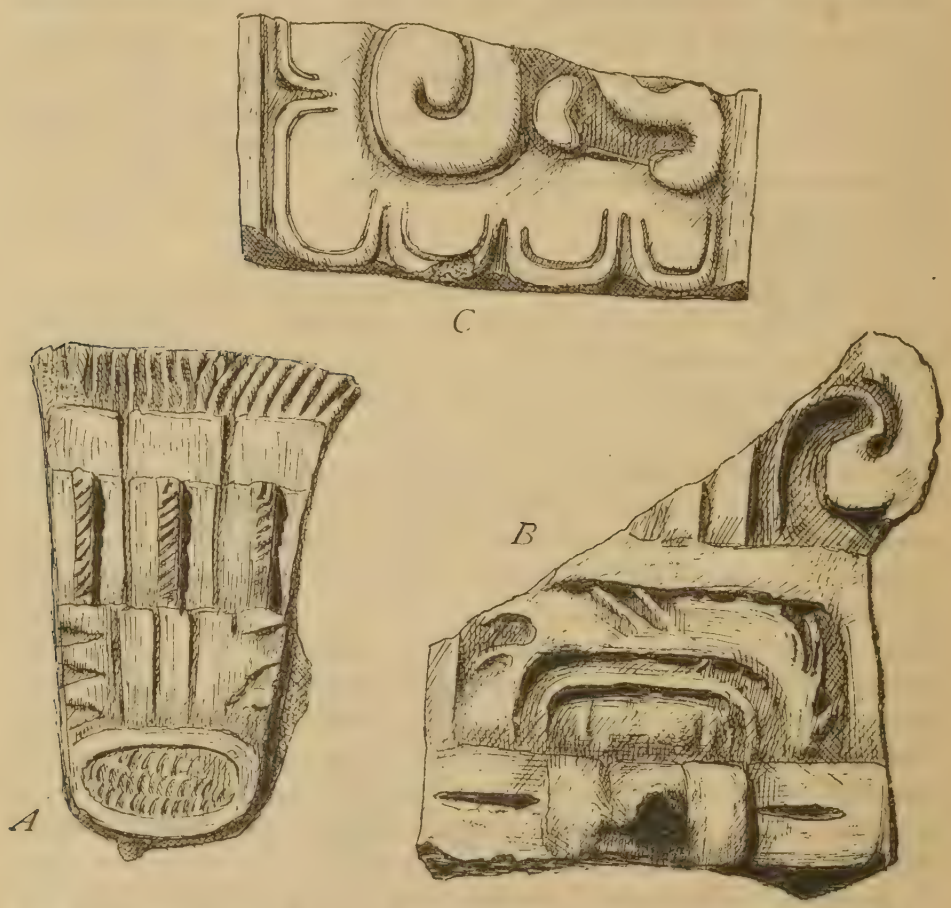


FIG. 1.—*a*, Adorno from Pit XVI. *b*, Adorno from Pit XV. *c*, Adorno from Pit XXV.

connection with which the adornos are found. These faces are much larger and thinner than those of the regular Toltec heads. Figure 2, *a*, *b*, shows two of these faces. The latter has the eyes colored white, the face red except at the sides and under the mouth, where it is yellow. Figure 2, *c*, is probably another of this type of head. It has red paint under the eyes.

WHISTLES AND FLAGEOLETS.—From the Aztec levels of the site 27 mouthpieces of clay whistles were found. Several human heads (fig. 2, *d*) occur which seem to have been parts of flageolets.

INCENSE BURNERS.—Mention has already been made of the elaborate braseros in connection with the "adornos." Several spoon-like incense burners were found in the upper levels, clearly of the Aztec culture. The handles are often decorated with stripes of red paint running lengthwise or across the handle. In one example incised lines were combined with the painted decoration. In some cases serpent heads formed the ends of the handles (pl. 13, *f*).

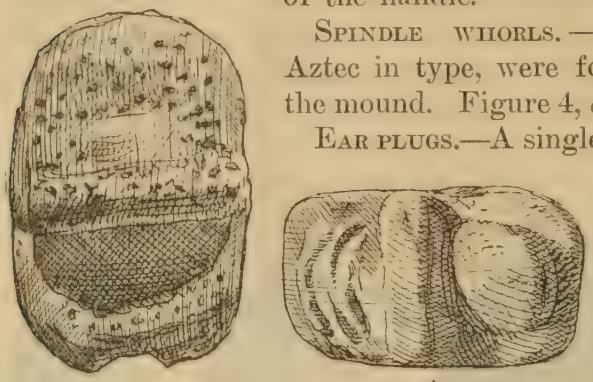
POTTERY DISKS, BUTTONS, MARBLES.—Several thin, round pottery disks occur together with checker-like disks, often with two incised

FIG. 2.—*a*, Face from brasero from Pit XV. *b*, Face from brasero from Pit XVI. *c*, Face, probably from brasero, from Pit XXV, above wells. *d*, Head, probably forming part of a flageolet.

lines at right angles on the top and bottom. Buttons are fairly common with a single perforation in the middle, or sometimes with four near the center. Round marble-like masses of clay were found. Many, 1 or 2 cm. in diameter, may have been used in the hollow legs of ollas for rattles. The largest ones were about 4 cm. in diameter.

RUBBERS AND STAMPS.—Small round pottery rubbers with a short projection at the back for a handle are common. In a few cases the bottoms of these pieces are incised, and they may have been used as stamps. Another type of object which has been called a rubber is seen in figure 3. They are smooth on the bottom with a handle

made of an extra piece of clay running across the top. Small shallow holes may cover a part or the whole of the top (fig. 3, *a*). Figure 3, *b*, shows a second variation with a pellet of clay added at one side of the handle.



a *b*

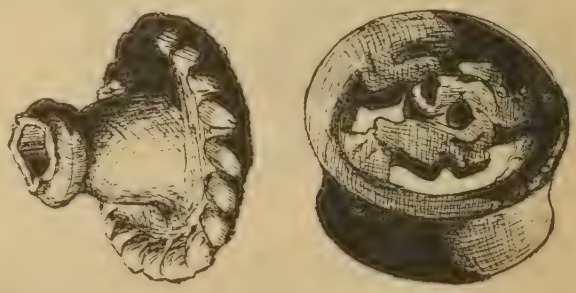
FIG. 3.—Pottery rubbers.

SPINDLE WHORLS. — Three spindle whorls, Aztec in type, were found near the surface of the mound. Figure 4, *a*, shows an unusual form.

EAR PLUGS.—A single ear plug (fig. 4, *b*) came to light in excavating to the south of floor A. It is evidently from the Aztec culture.

MOLDS.—These were uncommon. Two were found for making the typical Toltec heads, one for making an adorno, and one for molding a rosette or button.

POTTERY.—No complete classification of the ceramics of the Valley of Mexico has ever been attempted. Dr. Boas, in his "Álbum de arqueología mexicana hecho con 69 láminas," published by the International School, Mexico, 1912, gives a large number of pottery designs collected in the vicinity of Mexico City. Comparatively few of these designs were duplicated in the shards from this mound. When similar types occur, reference will be made to the Boas Album. An attempt has been made here to indicate very roughly the various types of pottery. This is presented merely as covering the collection in question and not in any way as an attempt to work out a complete classification of the ceramics of this part of the valley. It should be noted also that only decorated shards and pots are included. A fertile field is open to the student of ceramics in the study of the undecorated pottery. Practically no attention has ever been paid to this phase of the subject. The decorated pottery of the Archaic, Toltec, and Aztec cultures may usually be distinguished, but, as far as I know, no one has yet attempted to classify the undecorated pottery of these three horizons. In the following description it will be assumed that the types belong to the Toltec culture unless mention is made to the contrary.



a *b*

FIG. 4.—*a*, Spindle whorl from just below Floor A. *b*, Ear plug found south of Floor A.

Type I, Archaic white.—The Archaic culture is very poorly represented in the pottery from this site. The most common Archaic type noted here is that decorated on both sides with a white slip. There is usually no other decoration. In some cases, however, the pieces have roughly incised lines. The yellow base with red and white design and the brown base with red and white design, two common Archaic types from Zacatenco and Ticoman, are not found here (for Archaic painted pottery, see Boas Album, pls. 41, 47, 48).

Type II, Incised.—There is a large variety of decoration made by incised lines and it has been thought well to classify this into subtypes.

a. The most common form of incised pottery consists of low dishes, with flat bottoms and straight sides, and low bowls mostly of cream color or light yellow and occasionally black (pl. 15, *a*, *b*, and Boas Album, pl. 62). The design is of rough volutes or spirals along a band on the outside near the top. In a few cases the part covered by the design is red and the rest of the dish is yellow.[10]

b. Small flat-bottomed dishes with straight sides of a fine red polished ware. The most common designs are spirals and curves usually covering all of the outside. They are cut through the red slips, showing the yellow base (Boas Album, pl. 63, 1–5).

c. A red polished ware with the design of birds and animals scratched very deeply into the base (Boas Album, pl. 63, 13).

d. Brown base and slip with the design deeply incised and red paint rubbed into the lines of the design. This type is represented only by one shard.

FIG. 5.—Incised shard, Type IIe.

e. Flat-bottomed dishes of black ware with straight sides and three short legs. The designs are elaborate and the background is often cut away (pl. 15, *c*, and Boas Album, pl. 63, 16). Figure 5 is a very fine example of this type, showing a warrior or god with an elaborate speech scroll and a vulture as a headdress.

[10] The following types of Archaic incised pottery are not represented in this site: The heavy rimmed bowls in red with very faint and very roughly incised lines around the outside or inside (Boas Album, pls. 38, 9–18), and the thin brown or black ware with incised designs very badly made (Boas Album, pl. 54, 12, 15–18).

f. Very light yellow or brown ware. The designs are similar to those of class *e*, but they are not as deeply incised, and the background is very seldom cut away (Boas Album, pl. 58, 2).

g. Thin orange ware with incised and punctate designs. This type is very uncommon here. The Archaic punctate, a heavy-rimmed pottery with lines of holes made by the end of a stick or incisions made by a stick, so common on the hills to the north of the valley, is not represented at this site (Boas Album, pl. 37, 1–7).

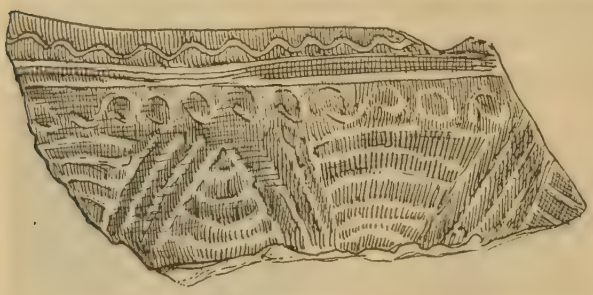


FIG. 6.—Incised shard, Type III.

h. Incised lines following very roughly the painted design (Boas Album, pl. 63, 14). The design is in red and is very badly drawn. The incised lines follow to some extent the outlines of the painted design. This type is uncommon here, but it is found at Teotihuacan. I am inclined to place this in the Toltec culture. There is some question, however, whether it does not belong to the Archaic horizon.[11] A few pieces found at Zacatenco would strengthen this latter view. There is also an Aztec type of red polished ware with black design showing incised lines following the design (p. 53).

i. Culhuacan gray. A dull gray ware with a design of lines incised over the upper part of the bowl (fig. 6, and Boas Album, pl. 32). This is a very common type at Culhuacan.

Type III, Cuneiform.—The marking covers the whole pot and is made with a flat or pointed stick in the soft clay (Boas Album, pl. 59, 14). This type is very uncommon here. It probably belongs to the Archaic culture. In some cases the marking seems to have been made by a comb. There is an allied type where the marking is found only on the bottom of the inside of flat dishes (Boas Album, pl. 38, 3). This is clearly Archaic.

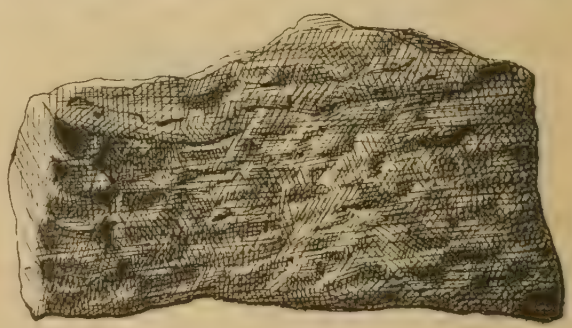


FIG. 7.—Textile-marked shard, Type IV.

Type IV, Textile marked.—This type (fig. 7) is found only in small shards. The shapes of the pieces could not be determined. The

[11] Compare Haeberlin, Types of ceramic art in the Valley of Mexico, p. 63.

texture is very coarse. It is sometimes difficult to distinguish this from what has been called "the Cuneiform type." This class of pottery is well represented here, and it is also found at Ticoman and other sites which date back to the Archaic period. It is not uncommon in some Aztec sites. It is therefore impossible to limit its manufacture to a single culture.

Type V, Grooved.—This class might perhaps be called a variety of the incised type. The lines are deeper, wider, and the edges smoother than in the typical incised ware. In the latter the incised lines break through the slip. In the present type the grooves are made before the slip is applied. The depressions may have been made with the end of the finger. Sometimes a squash-like appearance is given to the olla on account of these depressions (pl. 15, *d*, and Boas Album, pl. 58, 4). There is another type of grooved pot-

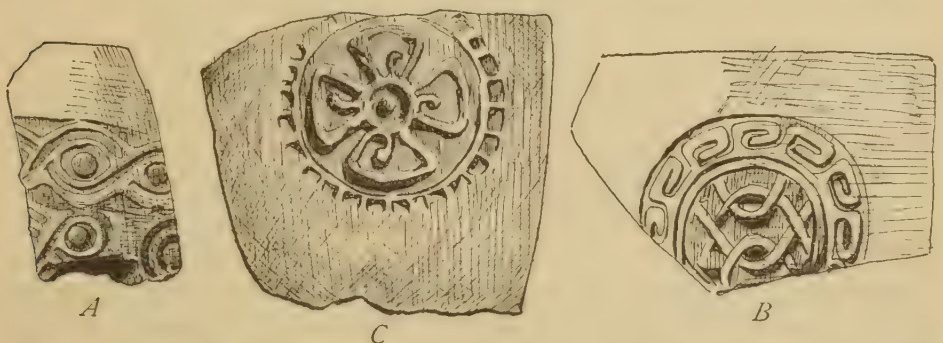


FIG. 8.—*a*, Stamped design, Type VI, from Pit XVI. *b*, Stamped design, Type VI. *c*, Stamped design, Type VI, from Pit XXV.

tery coming from the Archaic culture and not represented at this site. In this the depressions run horizontally along the outside near the top of the piece (Boas Album pl. 37, 14–16).

Type VI, Stamped.—The pieces decorated by stamps are usually bowls. The stamps offer a large variety of very beautiful designs. A common form is that of a twisted rope (fig. 8, *a*). Other designs are frets (fig. 8, *b*) and rosettes (fig. 8, *c*, and Boas Album, pls. 60, 61, 1–13).

Type VII, Molded.—This name has been given to that type of ceramics where the decoration is composed of pieces made in molds and attached to the outside of the jar. It is possible to distinguish several subtypes of this pottery.

a. Large elaborate designs, two of which usually cover the greater part of the olla.[12] The most beautiful shard found in this excavation is of this type (pl. 16, *a*). The speech scroll occurs in front of a

[12] Seler (op. cit., p. 501) describes this type of design as being "imprinted" (eingestempelter) or stamped. It is quite clear that the decoration was molded separately and attached to the olla.

human face with an elaborate headdress. Below is the head of a serpent. Another interesting shard of this type is shown in plate 16, *b*. It is the day sign "1 Cipactli," or "1 Couatl."

b. The most common form of molded decoration is found on round flat-bottomed and straight-sided vessels supported on three short legs and usually of black ware. At intervals around the bottom edge is a row of grotesque human faces, each from the same mold (pl. 15, *f*, and Boas Album, pl. 59, 11). The head may be replaced by a more simple design (pl. 16, *c*) or by a circular pellet of clay (Boas Album, pl. 59, 13).

c. Multiple or assembled: Another type of molded decoration shows the different parts of the design to have been made separately and assembled to form a complete design (pl. 16, *d*). The elaborate chimney braseros would belong to this type. These have been described under the heading of "Adornos" (p. 43).

d. Three handles:[13] One of the common types of Toltec pottery found both here and at San Juan Teotihuacan is shown in plate 15, *g*. This pottery is unpainted and coarse in texture. It is characterized by three handles projecting upward from the rim. A hole runs vertically through the handle, coming out on the outside of the vessel. On the outer side of each handle is a face. This is made separately in a mold and attached to the handle. Disks of clay are usually added at the sides and at the top of the head. The most common form of face is that of an old man, wrinkled and worn. Nineteen of these faces were found. Four were of the "spectacle" type with the spectacles on the forehead. Another common type (pl. 16, *e*) has the arms shown with one hand resting on the face. These faces have often been described as belonging to figurines. Dr. Spinden suggests that it is possible that these vessels were intended to be suspended by ropes running through the holes in the handles.

e. Molded and punctate: In this class the decoration is composed of a molded figure attached to the piece in combination with a punctate or incised design (pl. 16, *f*).

Type VIII, Fillet appliqué.—This type differs from the molded in the fact that the elements of the design seem to have been modeled by the hand or by a sharp stick and attached to the olla. The common

[13] Seler (op. cit., pp. 491–496) describes this class exhaustively. He gives a drawing of a portion of one of these bowls reproduced from Gamio (Proc. Inter. Cong. of Americanists, London, 1912, p. 184). He omits, however, Gamio's hypothetical restoration, which he does not consider very satisfactory. My photograph (pl. 15, *g*), which shows a bowl with two handles, the third of which is missing, indicates that Gamio's restoration is correct with the exception that he does not clearly indicate the usual break made in the outer surface of the bowl by the hole running down through the center of the handle. Seler calls this class of pottery "bowls with inner handles" (innere Schalengriffe) and considers that they served as covers of incense vessels. It is difficult to see how this is possible. The face shown on the handle on plate 15, *g*, is the type called by Seler the "ape face."

elements in this type of design are ropes or fillets of clay. There is much variety, however, in the designs of this class. Plate 17, *a*, shows a simple form, a rope effect along the rim of the piece. Another form is made by laying a ribbon of clay along the surface of the jar and pressing it down at intervals with the finger (pl. 17, *b*). This form may be combined with a molded design as in plate 17, *c*. A more pleasing form is made by spiral pieces of clay laid above a line of pellets. Plate 17, *d*, shows a design of this sort. This piece is very heavy and is covered with red paint applied after the olla was fired. Plate 17, *e*, shows the same border combined with a modeled bird form.

Type IX, Embossed.—The characteristic feature of this type is the addition to the body of the piece of small pellets of clay covering at equal intervals the whole or a portion of the outside of the olla (pl. 17, *f*). The bosses may be combined with incised lines (pl. 17, *g*). A common type of Archaic pottery might come also into this class. There is a heavy rim and at frequent intervals along the rim bosses or ribbons of clay are attached (Boas Album, pls. 37, 9, 12, and pl. 55, 5, 6).

Type X, Carved.—It has seemed best to place in a separate class that type of pottery in which the decoration seems to have been made in the wet clay of the piece itself by means of a sharp instrument. Plate 17, *h*, shows a shard of this type. The design is similar to that of plate 17, *e*, but the technique of the two is quite different.

Type XI, Stick polished.—This is a type of black pottery usually in the form of small globular vases which have a rough texture. The simple design of straight lines is made by rubbing down parts of this rough finish. The polished or smooth portions of the surface form the design.

Type XII, Painted, Coyotlatelco type.—There is a type of painted pottery that is found at this site more frequently than in any other hitherto excavated. It has, therefore, been called the "Coyotlatelco type," as the center of its manufacture may have been here. It is clearly Toltec, and most of the pieces here described came from Pits XV and XVI and from the deposits in the wells. There is an Archaic type that is superficially similar to this. The latter shows less polish, however, and the design in red on the outside is more roughly done. The Coyotlatelco type consists of a yellow slip with a rich red design. It has a good polish. The yellow varies, sometimes becoming a cream. The shapes of the vessels also vary, the most common form being the bowl with or without solid legs. The designs are found either on the outside or on the inside. Rarely is the same piece decorated on both sides. The design is usually composed of several elements arranged in horizontal bands around the olla and separated by solid red lines sometimes 1 cm. wide. A solid band almost invariably runs around the edge, usually on the inside. The elements

of the design are mainly geometrical with a number of curvilinear figures. Life forms are seldom represented. There is a decided difference between the designs on the outside and those on the inside of the pieces. These will be considered under two classes.

a. Interior designs: These are usually better drawn than those on the exterior, with a greater definiteness of outline and a greater use of the continuous band. The most common design is an undulating curve running continuously around the piece (pl. 18, *a*, *b*). This serpentine line may appear running vertically across a decorated band (pl. 18, *c*). A variation is seen in the S or Z shaped figures distributed along a zone (pl. 18, *c*) or arranged in definite lines around the piece (pl. 18, *d*). Still another allied type is composed of interlocking C's (pl. 18, *e*). This passes into the scroll (pl. 18, *f*). A variation of the scroll is seen in plate 18, *g–i*. Another very common design on the outside of the ollas is a stepped figure in solid red bordered by a single narrow stepped line (pl. 18, *d–f*, and Boas Album, pl. 57, 9). Other common designs are as follows: A triangle in solid red bordered by a single line with the apex of the triangle to the right or left of its base (pl. 18, *k*, and Boas Album, pl. 57, 6), a series of triangles or semicircles forming a band around the piece (pl. 18, *b*, *m*), a checkerboard design as a decoration in the bottom of the bowl (pl. 18, *g*), and a design difficult to describe (pl. 18, *l*).

b. Exterior designs: There is a greater variety in the colors used on the exterior of the pieces than those used on interior designs. The yellow slip may be overlaid by a creamy white, especially on the decorated border, and bands running down the sides at right angles to the border. The undecorated portion usually has the regular yellow color. As already pointed out, there is a decided difference in the character of the designs on those pieces decorated on the inside and the pieces decorated on the outside. When the exterior has any decoration it usually covers the greater part of the surface. There are two fairly well defined types of exterior decoration. The first shows many similarities in arrangement to that on the interior. When the banded designs running around the piece are found they are usually combined with broad stripes of red alternating with finer lines running down the side (pl. 19, *b*). The most common exterior designs of this type are as follows: The double line cross (pl. 19, *a*, *b*), the crescent (pl. 19, *a*), the single volute (pl. 19, *a*, *c*), a continuous line of volutes (pl. 19, *d*), and the S curve (pl. 19, *c*, *e*). A design clearly representing the human footprint, as shown in the manuscripts, is found on two pieces (pl. 19, *f*, *g*). The stepped pyramid combined with the scroll is seen in plate 19, *h*.

The second type of exterior design is bolder and less well drawn than the first, described above. The lines are thicker and often of a darker red. There may be large or small circles of solid red (pl.

19, *i*), parallel lines running vertically around the piece, spirals, serpent-like figures (pl. 19, *k*),frets (pl. 19, *l*), and a few which clearly go back to flower forms (pl. 19, *m*). Suggestions of bird forms also occur. The border may show the finer design, while the body of the piece may have the wider line and rougher decoration.

This type with the exterior decoration often shows a very dark-brown or even black color on the slip. It is a question whether this should be considered in a different class. The designs are exactly similar to those which have the usual yellow, and it seems as if the darker color was due to smoke in the manufacture.

Type XIII, "*Lost color.*"—This type of pottery is recognized over large areas of Middle America. The slip in the examples from this excavation is usually yellow, with or without wide lines of red. The color of the main design, composed often of concentric circles, has disappeared, allowing the base, a smoky gray, to appear. The shards showing this type are all small pieces, and it is therefore impossible to determine the shape of the pottery of this class. This type might more properly be called "negative painting," as the paint making the design has disappeared and the figures come out as a negative on the color of the base.

Aztec types.—There is usually very little difficulty in recognizing the decorated pottery from the Aztec culture. There are a number of well-defined and well-recognized types. The amount of Aztec pottery found in this site was not large and no attempt will be made to describe any types other than those met with in this excavation.

Type XIV, *Red polished Aztec.*—The common forms of this type are as follows: The vase with round body and a long flaring neck, those in the shape of an hourglass, and bowls. The pottery is red, with a brilliant polish, and the design, very often a fret, is in black paint. It is not uncommon to find a faintly incised line following the design very roughly. There is another variety of the red polished ware. It usually shows slightly less polish, and in addition to the black design on the red slip there is also a design in white. This latter color is much less permanent than the black and often has disappeared in many places. The white is found directly over the black, outlining the black or forming a design of its own. In some cases the black design is missing and only the white appears on the red slip. This class of red ware with the black and uneven white designs is also found to some extent at San Juan Teotihuacan. It is therefore impossible to place it definitely in the Aztec culture.

Type XV, *Wide line Aztec*, *Culhuacan type.*—This is the well-known wide-line Aztec. It may be called the "Culhuacan type," as it is found in great abundance in that locality. The slip is yellow and the designs are in black. They are hurriedly drawn and sketchy in appearance. The common shapes are as follows: Shallow and

deep plates with or without three legs, bowls of all sizes, and pitchers. There is often an incised or stamped design in the bottom of the plates. It is not necessary to describe the designs, as this type is well known.

Type XVI, Fine line Aztec, Tezcoco type.—This is the type with designs similar in general to that of the former, but the lines are much finer and the designs are more carefully drawn (Boas Album, pl. 67). It may be called the "Tezcoco type." The slip is yellow and the design is in black. It is a well-recognized type and need not be described. Few examples of either of these two latter types were found at this site.

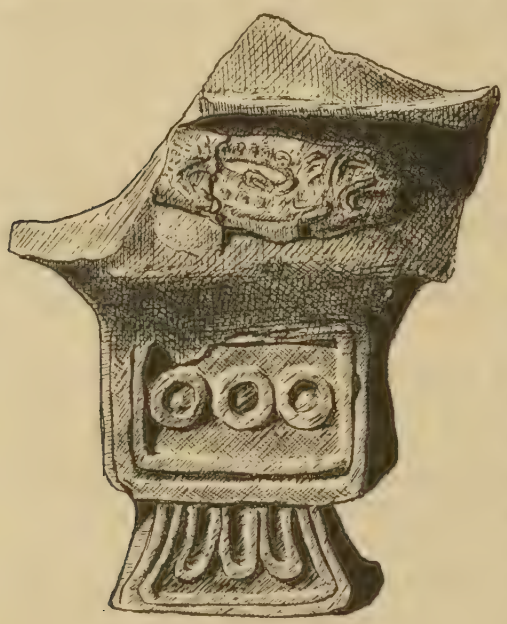


FIG. 9.—Pottery foot.

Type XVII, Orange Aztec.—This type is characterized by a dull finish. The slip is a yellowish orange and the design is very often floral in character.

Pottery shapes.—Very few complete pieces were found. Wherever possible attempts have been made in the preceding description to indicate the shapes of the various types. Plate 15, *g*, shows a well-recognized Aztec type of olla. It was found in the upper levels of the excavation.

Pottery feet.—There is a large variety in the supports of the different types of pottery. The round straight-sided bowls usually had three small solid feet. Many other supports were hollow, with or without perforations. The most common form of decorated support is seen in figure 9. This is clearly Toltec in type and was found on a bowl with the molded decoration. The feet of this class were themselves molded.

As this mound is the first of the kind to be excavated completely in the vicinity of Mexico City, care has been taken to indicate the order, the methods, and the reasons for the various steps taken. This paper is, therefore, a study of method quite as much as a study of results. It is to be hoped that other mounds similar to the one here discussed will be excavated. It is only after several of these have been studied that many of the perplexing questions arising in the present case can be answered. The spectacular side is lacking in an

excavation of this kind as compared with investigations on such structures as the pyramids of San Juan Teotihuacan, but the importance of the excavation of the smaller sites is great if we are to reconstruct the culture of the prehistoric peoples of the Valley of Mexico.

HARVARD UNIVERSITY, *24 May, 1919.*

BIBLIOGRAPHY

Boas, Franz. Album de colecciones arqueologicas. Publicaciones de la Escuela International de Arqueologia y Etnologia Americanas, 1911–1912. Seleccionadas y arregladas: Mexico, 1912.

———. Summary of the work of the International School of American Archaeology and Ethnology in Mexico. American Anthropologist, n. s., vol. 17, pp. 384–391, Lancaster, 1915.

Charnay, Désiré. The ancient cities of the New World, being travels and explorations in Mexico and Central America from 1857–1882. London, 1887. (Translated from the French.)

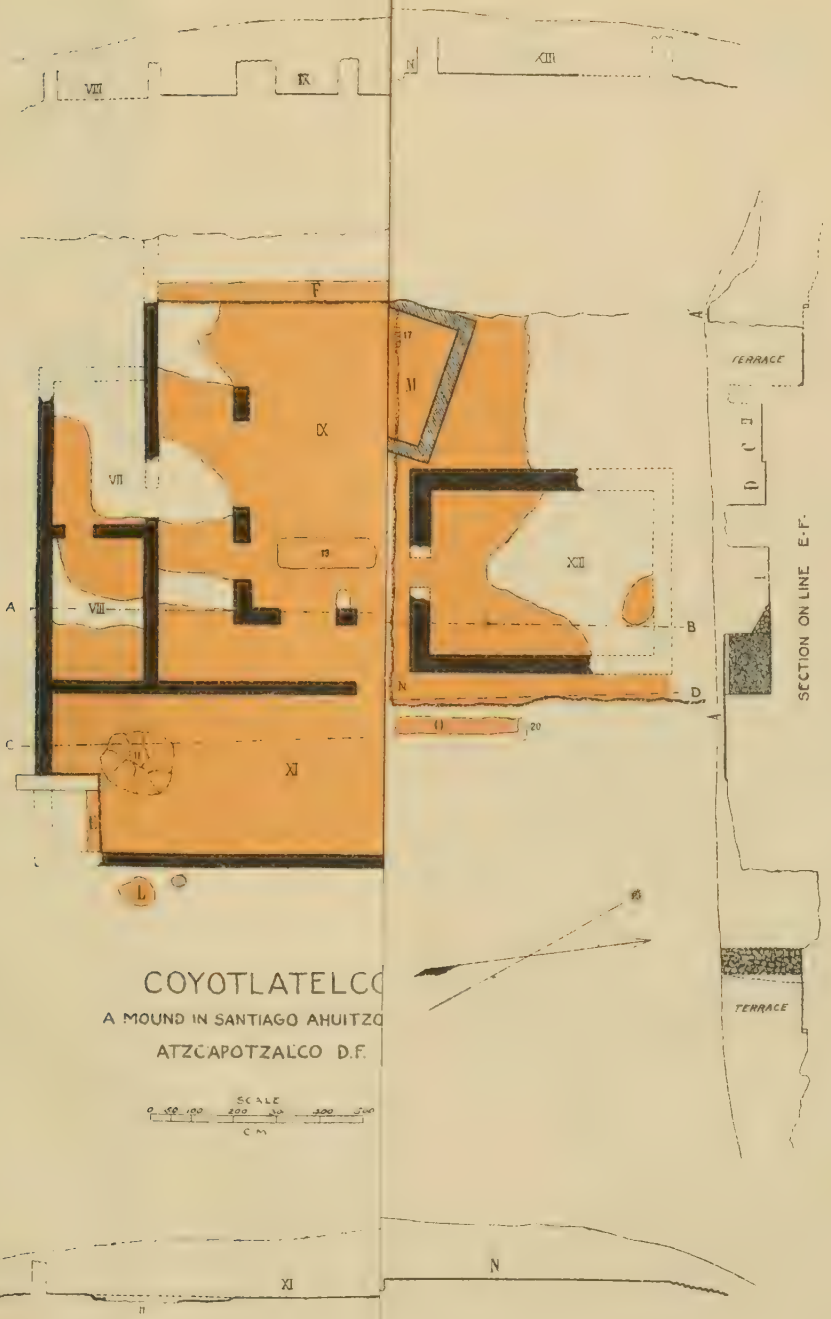
Gamio, Manuel. Arqueología de Atzcapotzalco, D. F., Mexico. Proceedings International Congress of Americanists, XVIII sess., London, 1912, pp. 180–187. London, 1913.

Haeberlin, Herman R. Types of ceramic art in the Valley of Mexico. American Anthropologist, n. s., vol. 21, pp. 61–70, Lancaster, 1919.

Seler, Eduard. Die Teotiuacan-Kultur des Hochlands von México. Gesammelte Abhandlungen zur Amerikanischen Sprach- und Alterthumskunde, vol. 5, pp. 405–585, Berlin, 1915.

Tozzer, Alfred M. Report of the Director of the International School for 1913–1914. American Anthropologist, n. s., vol. 17, pp. 391–395, Lancaster, 1915.

———. The domain of the Aztecs and their relation to the prehistoric cultures of Mexico. Holmes Anniversary Volume, pp. 464–468, Washington, 1916.



COYOTLATELCO

A MOUND IN SANTIAGO AHUITZO

ATZCAPOTZALCO D.F.

SCALE

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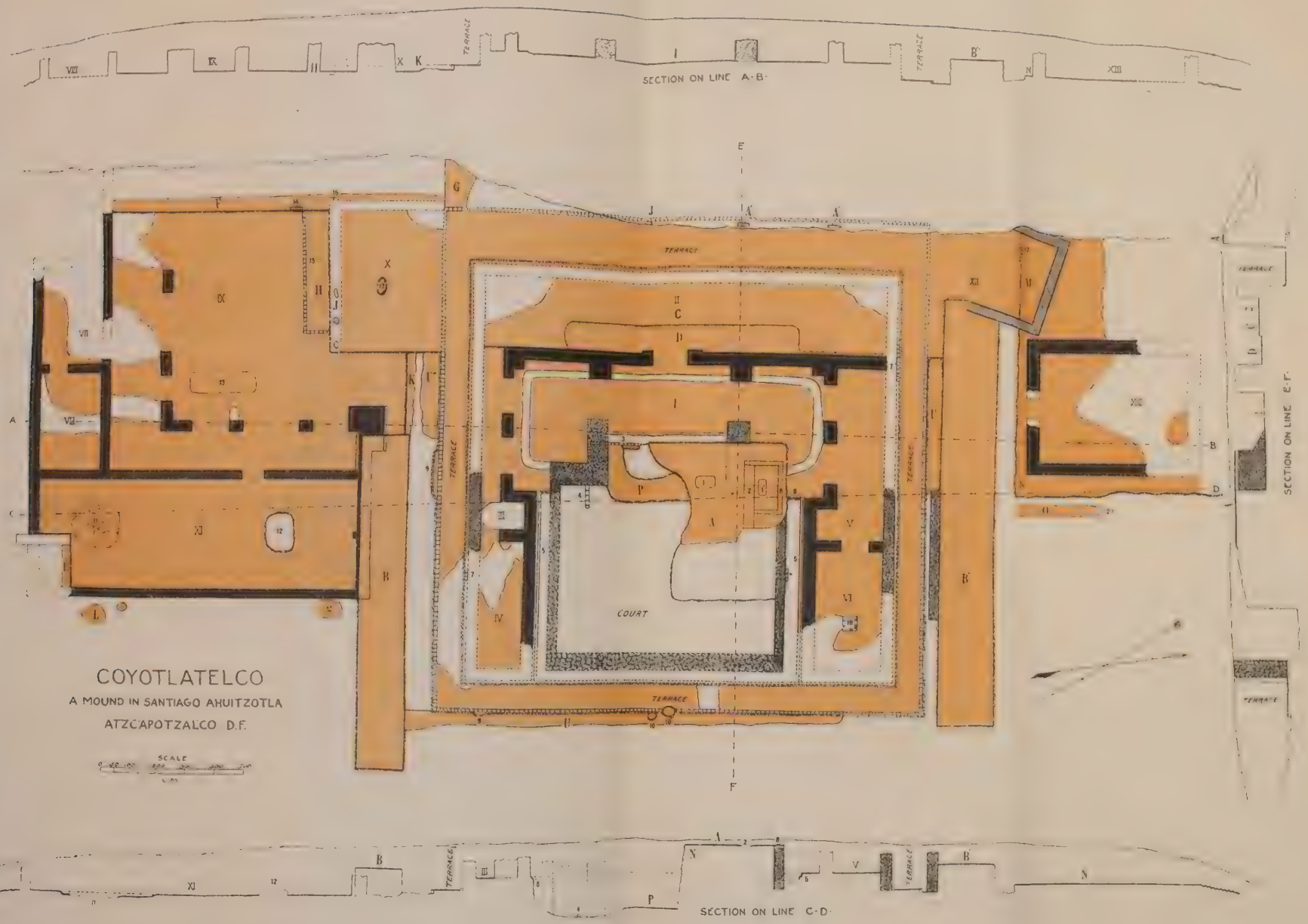

PLATE 1—PLAN OF UPPER LEVELS OF EXCAVATION WITH SECTIONS A-B. C-D. E-F

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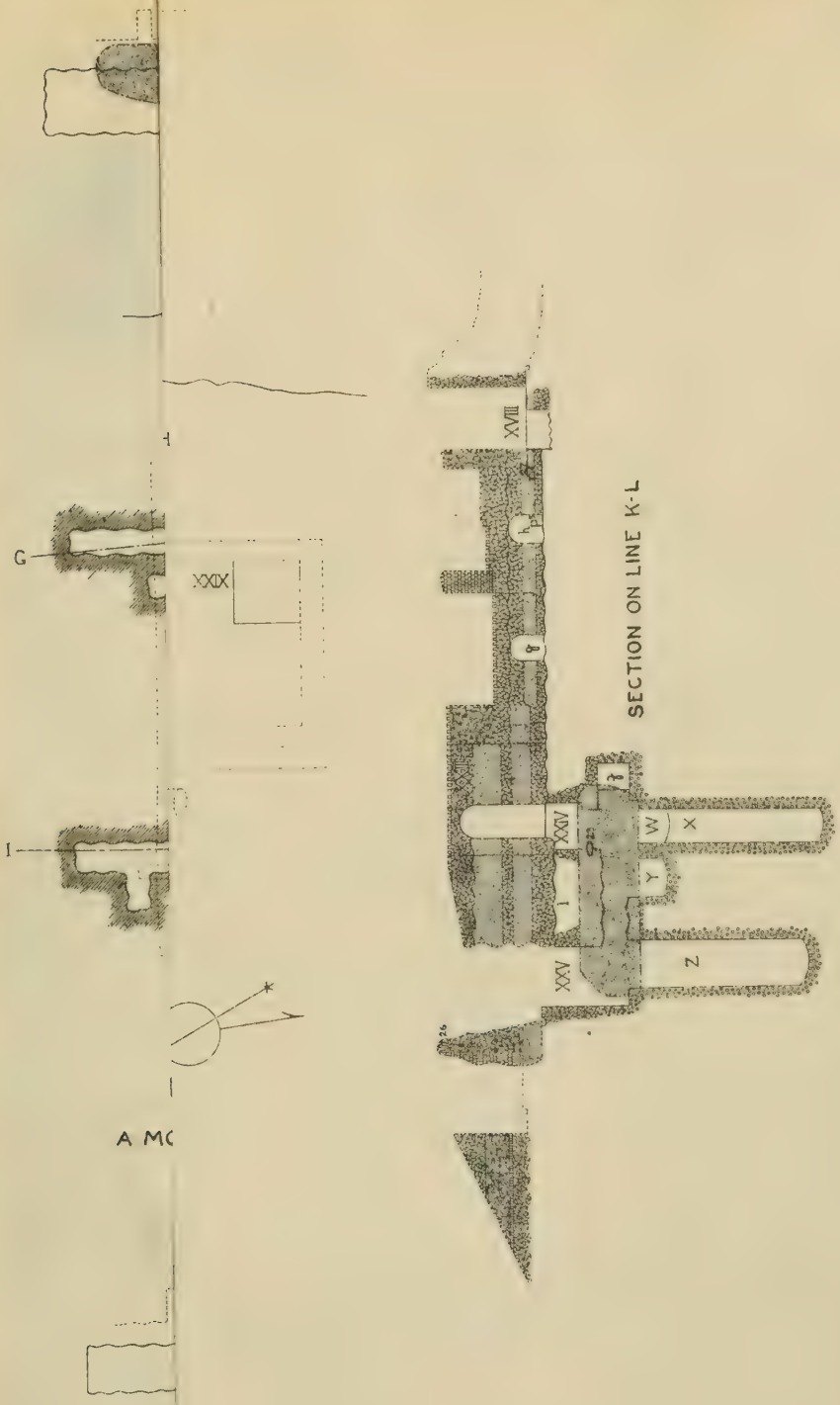

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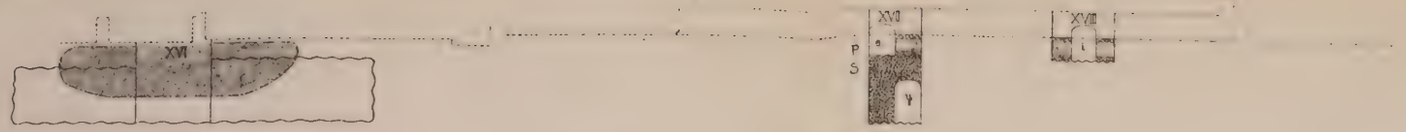
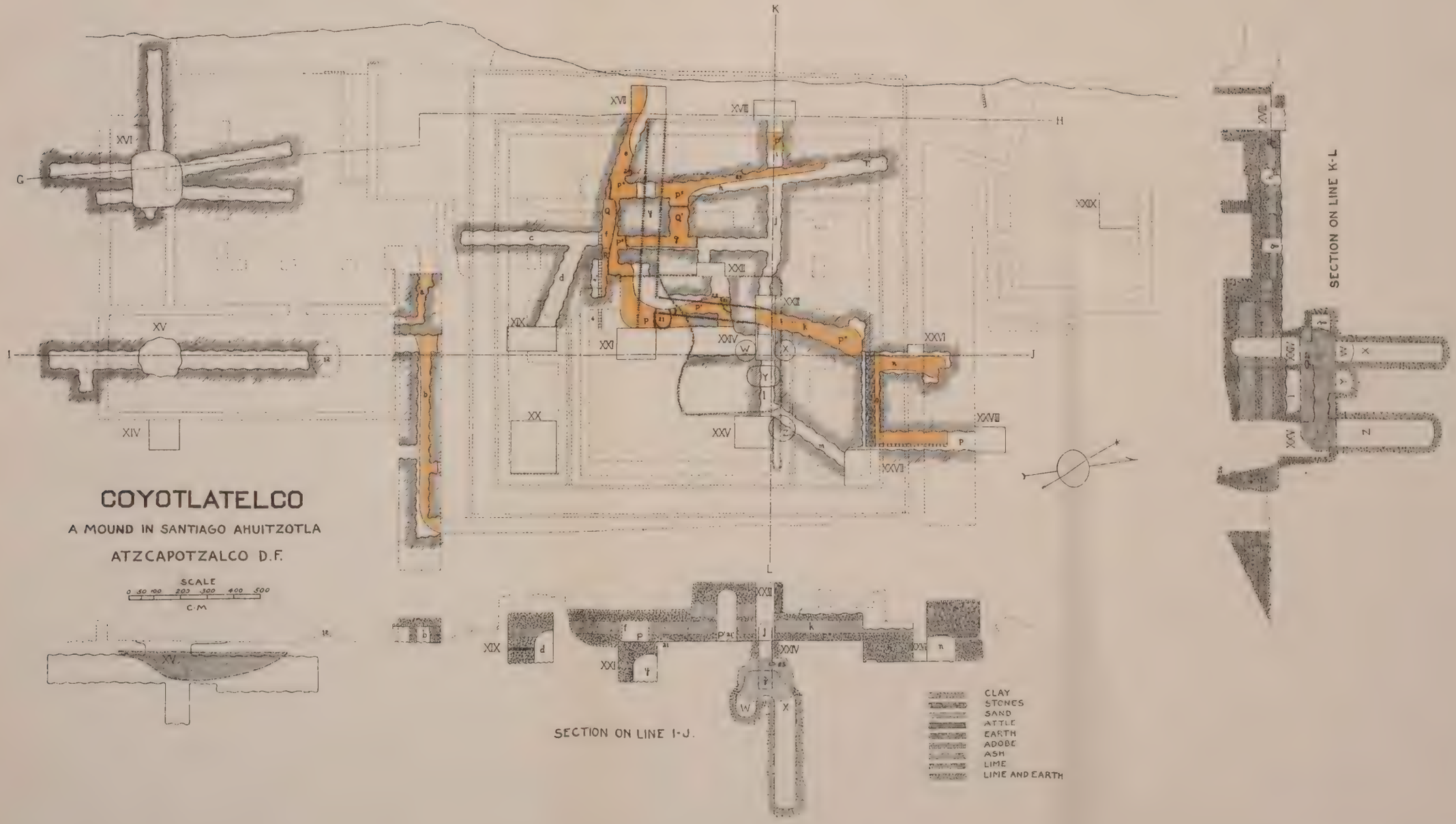


SECTION ON LINE G-H



COYOTLATELCO

A MOUND IN SANTIAGO AHUITZOTLA

ATZCAPOTZALCO D.F.

SCALE

0 50 100 200 300 400 500

C.M

SECTION ON LINE I-J.

PLATE 2--PLAN OF LOWER LEVELS WITH TUNNELS AND SECTIONS G-H, I-J, K-L.

NORRIS PETERS INC. LITHO. WASHINGTON, D. C.

GENERAL VIEW OF SITE, LOOKING NORTH.

a. Looking west from Patio, showing part of entrance to Tunnel y, Floor P, and entrance to Tunnel f under Room I.

b. Floor A, Room I, and Pit XIX, with entrance to Tunnel d.

a. Main structure, looking north, showing Eastern Terrace, Floor B, and Patio.

b. Northern part of Main Structure, showing Floor A and Rooms V and VI.

a. Southwestern corner of excavation, showing Room IX with foundations of pillars, Floor H, and Room X.

b. Northern Extension with Room XII, Floors M and B′, and Room XIII.

a. Southern Extension with Rooms XI, IX, and X, and southern end of Room II.

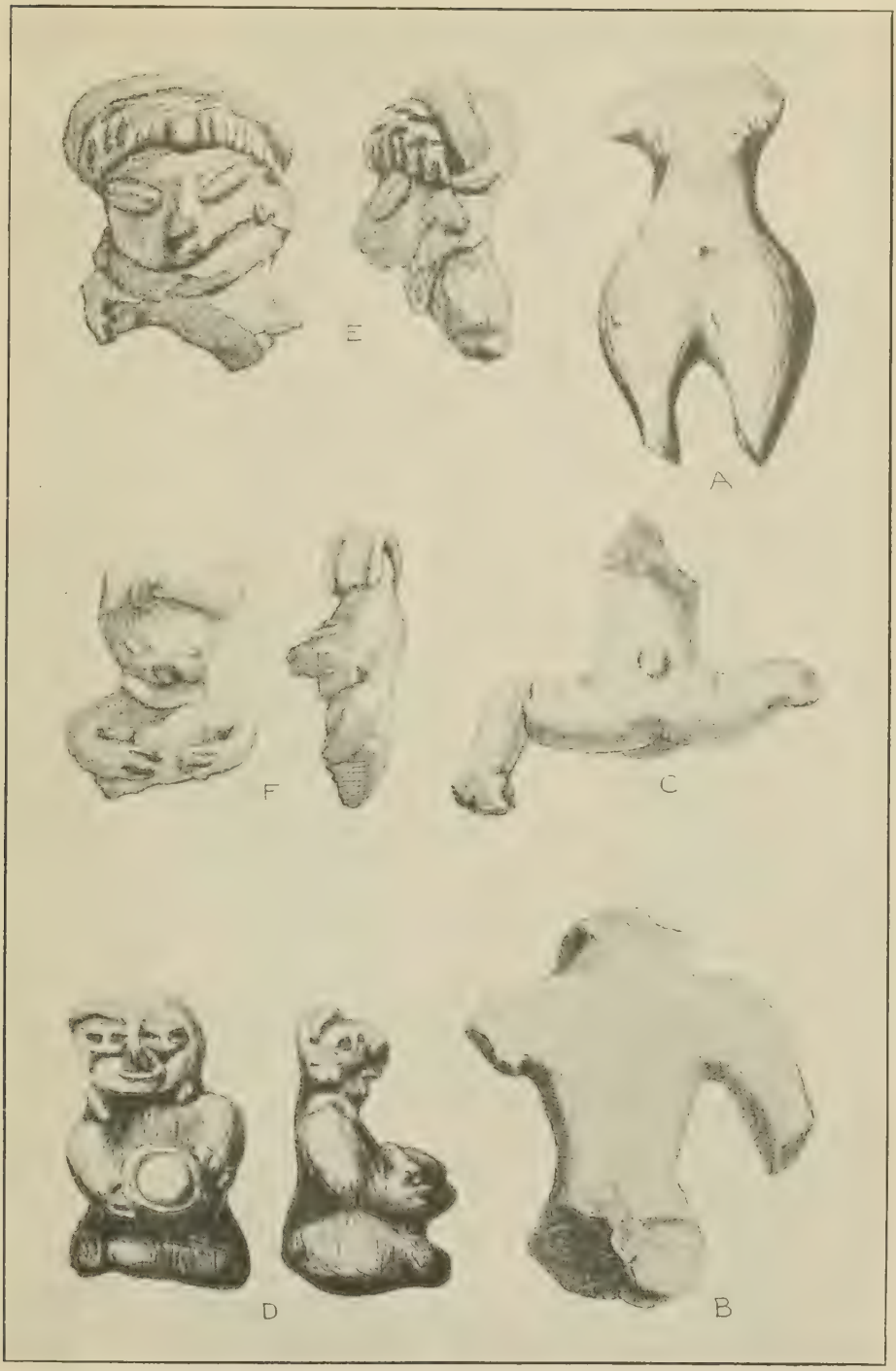
b. Northern Terrace, looking west, with Room VI, Floor B′, and Room XIII.

a. Top of mound with Floor A uncovered.

b. Floor A, break in floor, showing the upward slope at edges of floor.

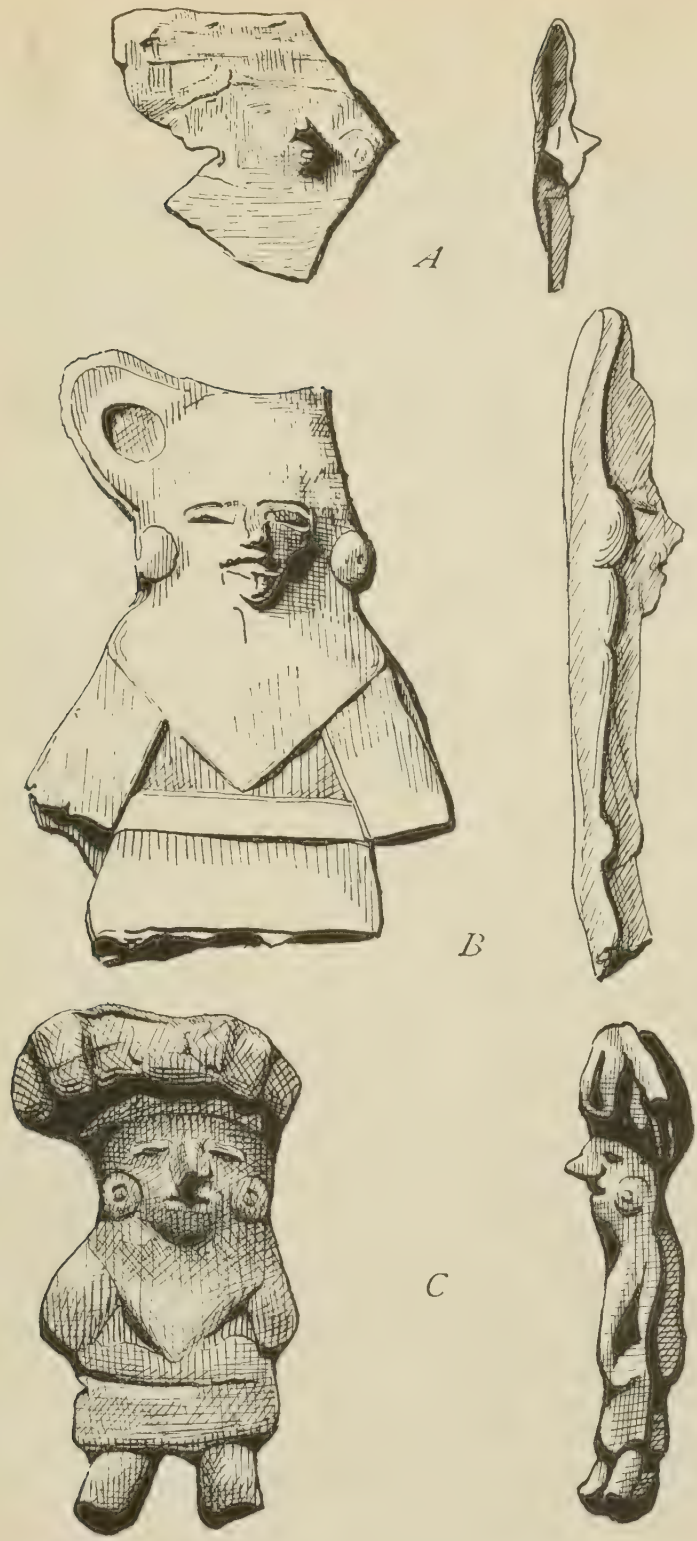
c. Room II, showing the two levels.

d. Northern end of Room IX, showing the overhang of the wall.



A. Archaic body from tunnel under Room II. *B*. Archaic body from Pit XVI. *C*. Toltec body from Pit XXV, above wells. *D*. Archaic figurine. *E, F*. Archaic head.

A. Toltec head with holes in forehead, from tunnel under Room II. *B*. Toltec figurine from beneath Floor A. *C*. Toltec head and body from Floor B. *D, E*. Toltec head of God Xipe from Pit XV.



A. Toltec figurine, Coyotlatelco type, from Pit XVI. *B*. Toltec figurine, Coyotlatelco type, from wells. *C*. Toltec figurine, Coyotlatelco type, from excavation to west of road.

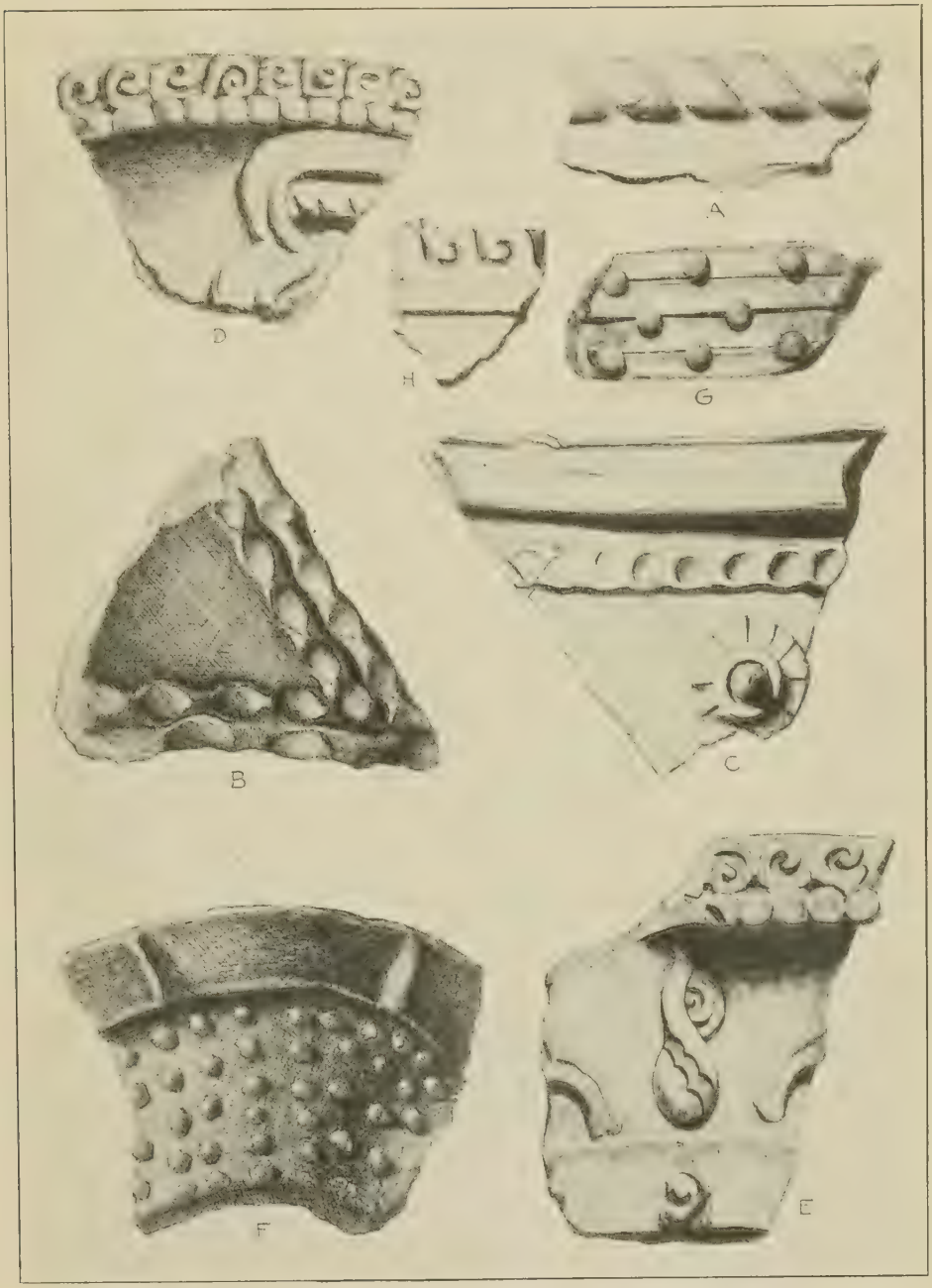
A. Aztec head from above floor of Room IX. *B*. Aztec head from above floor of Room II. *C*. Crude Aztec figurine from above Floor B. *D*. Crude Aztec figurine from above Floor A. *E*. Crude face from Pit XV. *F*. Grotesque head with perforations on nose. *G*. Animal figurine from above Floor B. *H*. Owl head from Pit XVI.

A. Ocelotl head from Pit XVI. *B*. Deer head from Pit XVI. *C*. Deer head attached to olla from near surface in southwest corner of site. *D*. Animal figurine from Pit XV. *E*. Hollow figure of deer from upper levels. *F*. Portion of serpent head from above Floor M.

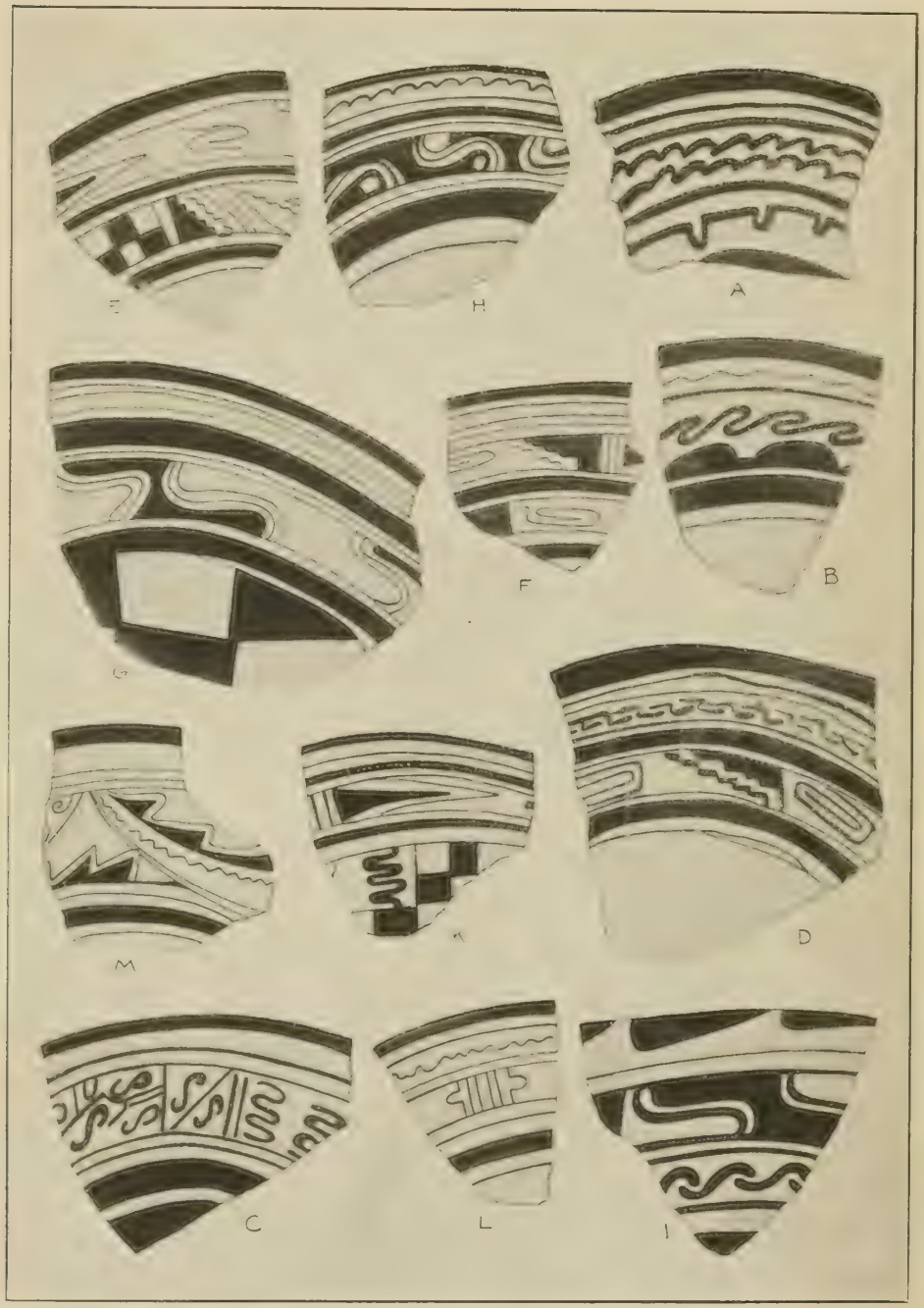
INCENSE BURNER, SHOWING THE USE OF ADORNOS ON THE COVER.

A, *B*. Incised Toltec pottery, Type IIa. *C*. Incised Toltec pottery, Type IIe. *D*. Grooved Toltec pottery, Type V. *E*. Undecorated Aztec olla. *F*. Molded Toltec pottery, Type VIIb. *G*. Three-handled, molded Toltec pottery, Type VIId.

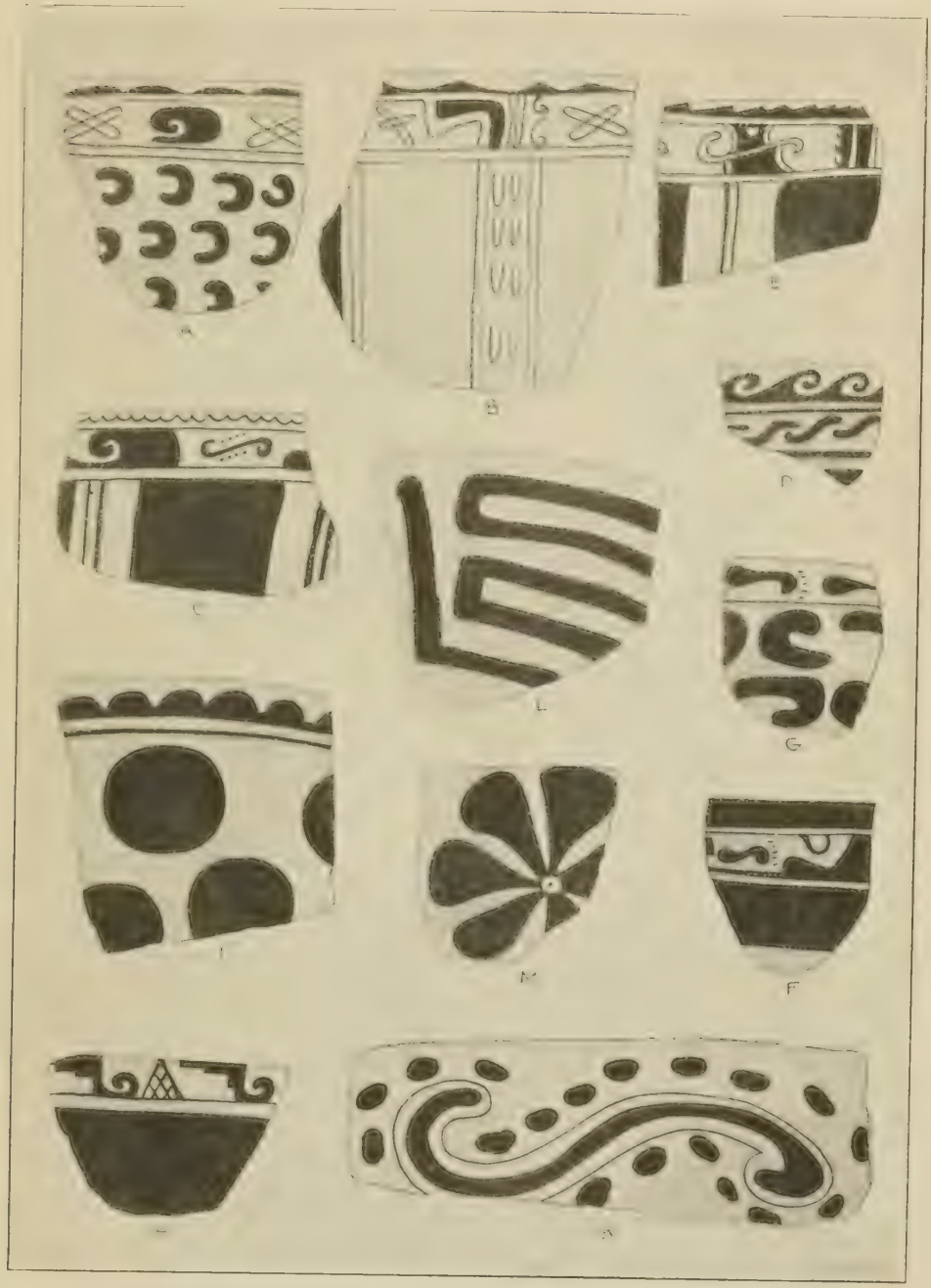
A. Molded design, Type VIIa, from Pit XXV. *B*. Molded design, Type VIIa, from tunnels under Room I. *C*. Molded design, Type VIIb. *D*. Molded design, Type VIIc, from Pit XXV. *E*. Molded design, Type VIId, from Pit XV. *F*. Molded design, Type VIIe, from Pit XXV.



A, *B*. Fillet design, Type VIII. *C*. Fillet design, combined with molded, Type VIII, from under Floor A. *D*, *E*. Fillet design, Type VIII, from Pit XV. *F*. Embossed design, Type IX. *G*. Embossed design, combined with incised lines, Type IX, from wells. *H*, Carved design, Type X, from tunnels.



A. Painted interior design, Coyotlatelco type, Type XIIa, from Pit XV. *B, F*. Painted interior design, Coyotlatelco type, Type XIIa, from Room IX. *C-E, G-M*. Painted interior design, Coyotlatelco type, Type XIIa, from Pit XVI.



Painted exterior designs, Coyotlatelco type, Type XIIb, from tunnel under Room V.

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